

ACIDIC PRECIPITATION
IN ONTARIO STUDY

STANDARDS DEVELOPMENT BRANCH, M.E.
36936000005979

CUMULATIVE AMBIENT AIR
CONCENTRATION LISTINGS
1988

007-90

JULY 1990

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Environment
Environnement

Jim Bradley, Minister/ministre

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CUMULATIVE AMBIENT AIR CONCENTRATION LISTINGS

1988

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Atmospheric Research and Planning Unit
Air Resources Branch
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This report was prepared by Diane Green of the APIOS Atmospheric Deposition and Chemistry Program. However, the data themselves are a product of the combined efforts of many individuals. Precipitation samples were collected by a large number of site operators, whose names cannot be individually mentioned here, under the coordination of the APIOS environmental technicians Scott Kennedy (in the Southwestern Region), Steve Elliott (in Southeastern Region), Wim Smits (in Northwestern Region), Bill Trayling (Northeastern Region), and J.P. Varto (in Central Region). Sample handling was carried out by Sue Lampinen and Gail Fielding. Chemical analyses were performed at the Laboratory Services Branch under the coordination of Frank Tomassini. Invaluable clerical and computer assistance were provided by Peter Maher, Joseph Lamb and Roberto Banchon. All enquiries regarding the reported data should be directed to Neville Reid, Coordinator, Atmospheric Deposition and Chemistry Program, at (416) 326-1691.

TABLE OF CONTENTS

		<u>PAGE</u>
PART I	INTRODUCTION	III
PART II	STATION DESCRIPTION AND LOCATION MAP	VI
PART III	CENTRAL REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS	

<u>Station Name</u>	<u>Map Ref. No.</u>	
Campbellford	13	1
Dorset	20	3
Uxbridge	11	5

PART IV	NORTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS	
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<u>Station Name</u>	<u>Map Ref. No.</u>	
Gowganda	25	7
Killarney	23	9
Mattawa	22	11
McKellar	21	13
Moonbeam	27	15
Moosonee	35	17
Turkey Lake	37	19

PART V	NORTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS	
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<u>Station Name</u>	<u>Map Ref. No.</u>	
Dorion	31	21
Ear Falls	35	23
Geraldton	30	25
Pickle Lake	36	27
Quetico Centre	32	29

PART VI SOUTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

<u>Station Name</u>	<u>Map Ref. No.</u>	
Cloyne	14	31
Dalhousie Mills	16	33
Golden Lake	17	35
Smith's Falls	15	37

PART VII SOUTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

<u>Station Name</u>	<u>Map Ref. No.</u>	
Colchester	01	39
Palmerston	08	41
Port Stanley	03	43
Shallow Lake	09	45
Wilkesport	04	47

PART I

INTRODUCTION

INTRODUCTION

The data listed herein are a summary of the results acquired from the APIOS cumulative ambient air sampling network from January 1988 to December 1988. All data presented in this report have been screened for validity. Remarks and qualifications have been appended to records, and/or results where necessary. The screening procedure involves the application of a Dixon Ratio Test to concurrent data from all the sites in the same region over a given sampling period. Field comments are referred to in order to assist in the identification of problematic samples. Samples that were determined to be obvious outliers were flagged as unreliable ("U"). The sampler utilized for cumulative ambient air sampling is the Metrex AS-2 low volume air sampler. The sampler is loaded and the filter pack is exposed for 28 days beginning at 0700 h EST and terminating at 0700 h EST at the end of the sampling period. Sampling details are described in another document¹.

Station Identification

The station identification is defined by four descriptive fields (e.g. - Dorset/Cumulative/LoVol #20). The first field refers to the sampling location. The second and third fields describe the sampling interval and the instrumentation used respectively. The last numeric field refers to the index code utilized on the location map.

Cumulative Ambient Air Concentration Listings

Each filter pack is loaded with a Whatman 40 filter, a nylon filter and a pair of Whatman 41 filters with the first two filter types being upstream and the last filter type being downstream. The Whatman 40 filter is analysed for particulates including SO₄, NO₃ and some trace metals.

The nylon filter is analysed for gaseous HNO₃ and the Whatman 41 filter (impregnated with O₂K₂CO₃ - glycerol) is analysed for gaseous SO₂. Beginning in 1985, "Sulphur Dioxide" is corrected by the addition of nylon filter sulfate. In these reports, the sulphur loading on nylon filters is interpreted as sulphur dioxide. However, it is possible that organic sulphur compounds also contribute to this loading. Methods do not currently exist to quantify this contribution in routine network operation. The reported parameter "TOTL NO₃" represents total nitrates and is calculated by the summation of N-HNO₃ and N-NO₃. No individual value of particulate nitrate and nitric acid are reported due to potential artifacts of the filter media used. Prior to 1986, if a detection limit was encountered in the calculation of "TOTL NO₃" then a value corresponding to one half the detection limit was utilized. These results are no longer halved. Remark codes (e.g. -U, A) appended to individual results are defined in a later section.

1. Chan, W.H., Orr, D.B. and Vet, R.J. (1984). Acidic Precipitation in Ontario Study - An Overview: The Cumulative Wet/Dry Deposition Network. Ontario Ministry of the Environment Report #ARB-164-84-ARSP.

Field Comment Code Index

A - Sampler malfunction
B - Hydro failure (known/suspected)
C - Flow volume suspect
D - Contamination (known/suspected)
E - Filter placement incorrect
F - Sample not submitted
Q - Other

Office Comment Code Index

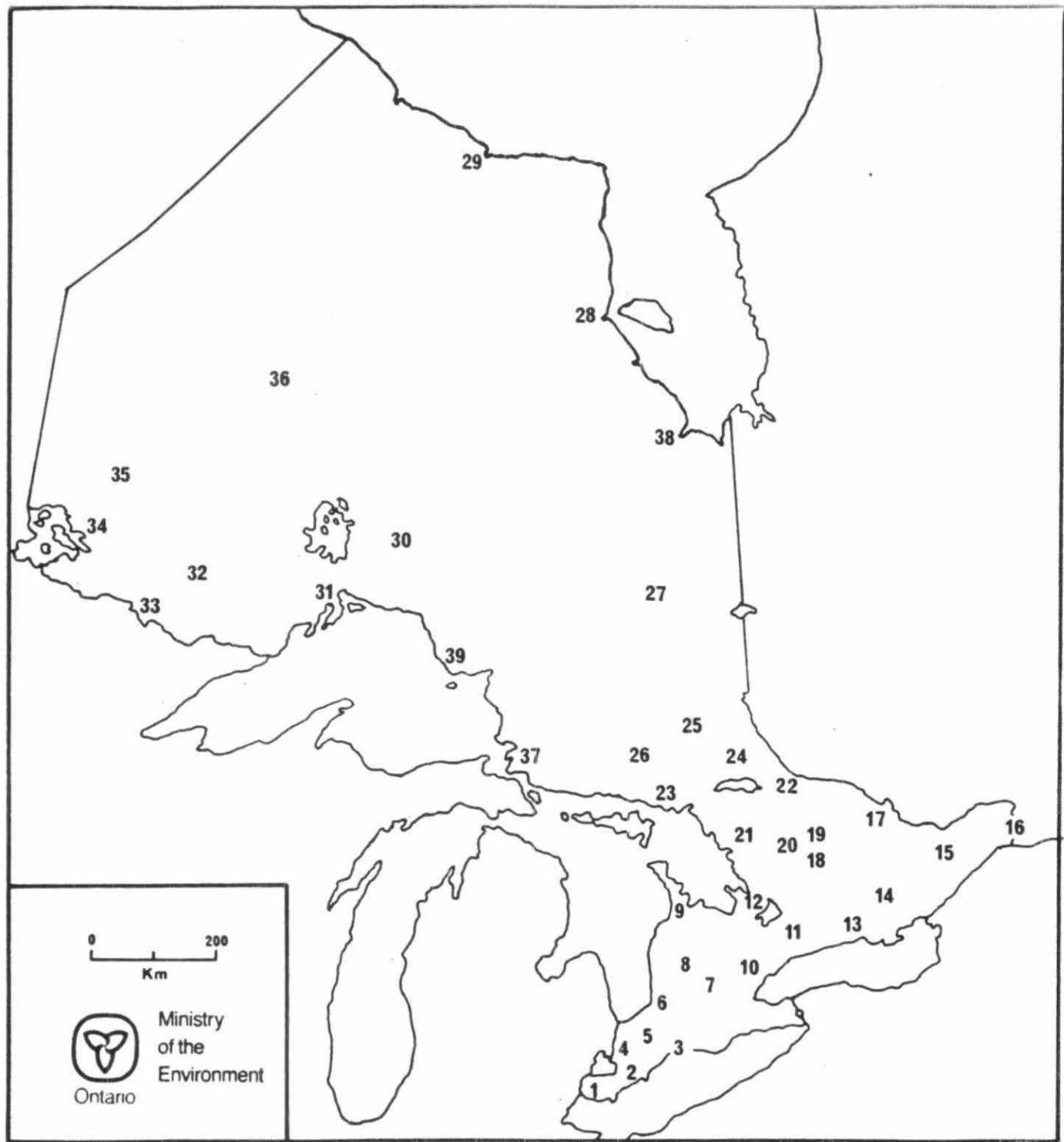
F - Data invalidated - if the daily average flow volume is outside the range of (2880 + 50%) litres per day.
Z - Abnormal sampling period.

Result Remark Code Index

< - actual result greater than value reported
> - actual result less than value reported
<T - actual result less than criterion of detection
<W - no response, minimum possible result reported
A - approximate value
U - unreliable result
D - outlier of Dixon Ratio Test

PART II

STATION DESCRIPTION AND LOCATION MAP



1. Colchester*	15. Smith's Falls*	29. Winisk (rem. Dec '86)
2. Merlin	16. Dalhousie Mills*	30. Geraldton (replaced
3. Pt. Stanley*	17. Golden Lake*	Nakina, Aug '83)
4. Wilkesport*	18. Wilberforce	31. Dorion*
5. Alvinston	19. Whitney	32. Quetico Centre*
6. Huron Park	20. Dorset*	33. Lac la Croix
7. Waterloo	21. McKellar*	34. Experimental Lakes Area
8. Palmerston*	22. Mattawa*	35. Ear Falls*
9. Shallow Lake*	23. Killarney*	36. Pickle Lake*
10. Milton (removed	24. Bear Island	37. Turkey Lake*
March '84)	25. Gowganda*	38. Moosonee* (installed
11. Uxbridge*	26. Azure Lake (repl.	October '85)
12. Coldwater	Ramsey, June '83)	39. Otter Island* (summer only)
13. Campbellford*	27. Moonbeam*	40. Sutton, Quebec
14. Cloyne* (repl.	28. Attawapiskat	(Intercomparison
Kalladar, June '83)	(rem. Feb '84)	Site)

* indicates both a wet and dry deposition network site

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS-ACIDIC PRECIPITATION IN ONTARIO STUDY
 CUMULATIVE AMBIENT AIR SITES

STATION ID	MOE REGION	STATION NAME	ELEV (M)	LATITUDE (NORTH)	LONGITUDE (WEST)	UTM GRID CO-ORDINATES	
						(NORTHING)	(EASTING)
000001-22-21-1041	SOUTHWESTERN	COLCHESTER	183	41°59'15"	82°55'41"	4649973	340284
000001-22-21-1061	SOUTHWESTERN	PORT STANLEY	213	42°40'22"	81°09'55"	4724277	486457
000001-22-21-1071	SOUTHWESTERN	WILKESPORT	183	42°42'11"	82°21'13"	4728515	389135
000001-22-21-1091	SOUTHWESTERN	SHALLOW LAKE	229	44°34'54"	81°06'58"	4936270	490782
000001-22-21-1101	SOUTHWESTERN	PALMERSTON	389	43°48'19"	80°54'12"	4850035	507776
000001-22-21-3011	CENTRAL	DORSET	320	45°13'26"	78°55'52"	5009656	662429
000001-22-21-3061	CENTRAL	UXBRIDGE	244	44°12'46"	79°12'38"	4896847	642958
000001-22-21-3081	CENTRAL	CAMPBELLFORD	175	44°17'28"	77°47'33"	4907783	277202
000001-22-21-4061	SOUTHEASTERN	SMITH'S FALLS	122	44°56'41"	75°57'48"	4977044	423999
000001-22-21-4071	SOUTHEASTERN	DALHOUSIE MILLS	69	45°19'00"	74°28'13"	5018048	541521
000001-22-21-4081	SOUTHEASTERN	GOLDEN LAKE	160	45°36'48"	77°12'03"	5053226	328397
000001-22-21-4091	SOUTHEASTERN	CLOYNE	259	44°49'10"	77°11'07"	4964999	327221
000001-22-21-5011	NORTHEASTERN	MCKELLAR	244	45°31'15"	79°55'19"	5041158	584196
000001-22-21-5021	NORTHEASTERN	KILLARNEY	183	45°58'20"	81°29'18"	5090859	462167
000001-22-21-5031	NORTHEASTERN	MATTAWA	198	46°16'39"	78°49'19"	5126968	667810
000001-22-21-5061	NORTHEASTERN	GOWGANDA	343	47°39'04"	80°46'32"	5277329	516647
000001-22-21-5071	NORTHEASTERN	MOONBEAM	244	49°19'40"	82°01'10"	5464175	425924
000001-22-21-5141	NORTHEASTERN	TURKEY LAKES	440	47°03'15"	84°24'20"	5214246	697468
000001-22-21-5161	NORTHEASTERN	MOOSONEE	8	51°12'35"	80°42'20"	5672970	520568
000001-22-21-5201	NORTHEASTERN	MCFARLANE LAKE	246	46°25'57"	81°57'03"	5142324	426948
000001-22-21-6011	NORTHWESTERN	DORION	244	48°50'33"	88°36'45"	5410982	381684
000001-22-21-6031	NORTHWESTERN	EAR FALLS	350	50°38'31"	93°13'13"	5609814	484424
000001-22-21-6041	NORTHWESTERN	PICKLE LAKE	360	51°02'41"	90°12'04"	5658308	696198
000001-22-21-6071	NORTHWESTERN	QUETICO CENTRE	420	48°24'44"	91°12'08"	5363461	633036
000001-22-21-6111	NORTHWESTERN	OTTER ISLAND	204	48°06'50"	86°04'25"	5329155	568954
000001-22-21-6121	NORTHWESTERN	GERALDTON	350	49°48'18"	86°45'52"	5516758	516950

PART III

CENTRAL REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION-CE STATION-CAMPBELLFORD LOVOL SITE NO.1 -----

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
00067020	AP02566		02	01	JAN 26, 1988	DEC 31, 1987	1900	2050	1	.	
00067012	AP02566	AS	02	01	FEB 23, 1988	JAN 26, 1988	1720	1900	1	52921	
00067018	AP02566	AS	02	01	MAR 22, 1988	FEB 23, 1988	1615	1720	1	53054	
00066006	AP02635	AS	02	01	APR 19, 1988	MAR 22, 1988	1815	1615	1	60501	
00066017	AP02635	AS	02	01	MAY 17, 1988	APR 19, 1988	1830	1815	1	71920	
00066081	AP02783	AS	02	01	JUN 15, 1988	MAY 17, 1988	1845	1830	1	41890	
00066084	AP02783	AS	02	01	JUL 12, 1988	JUN 27, 1988	2215	1515	1	33034	
00106122	AP03182		02	01	SEP 19, 1988	JUL 12, 1988	1640	2215	1	.	
00024692	AP02915	AS	02	01	OCT 4, 1988	SEP 19, 1988	1815	1640	1	43596	
00024701	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1840	1830	1	82768	
00024719	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1100	1855	1	81900	
00094679	AP02994	AS	02	01	DEC 28, 1988	NOV 29, 1988	1236	1105	1	91123	
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX	SULFATE	NITRIC		NITRATE		CALCIUM	
	2			UG/M3	UG/M3	UG/M3		UG/M3		UG/M3	
00067020	FQ	Z		*****	*****	*****		*****		*****	*****
00067012				10.37	2.95	0.165		0.652			0.246
00067018	D			7.12	2.70	0.094		0.556			0.452
00066006	D			4.13	3.44	0.103		0.669			0.364
00066017				3.16	2.75	0.058		0.445			0.528
00066081	B		UG	8.96	6.97	0.191		0.776			0.939
00066084	BQ	Z		6.81	7.60	0.159		0.530		UG	2.975
00106122	F	Z		*****	*****	*****		*****		*****	*****
00024692		Z		3.86	3.05	0.092		0.310			0.803
00024701				2.36	LG	1.12		0.041			0.266
00024719				8.04		3.16		0.068			0.452
00094679	C			8.98	2.34	0.100		0.658			0.483

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 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=CE STATION=CAMPBELLFORD LOVOL SITE NO.1								
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD	
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00067020	****	****	****	****	****	****	****	****
00067012	0.690	0.057	0.359	<T 0.076	<T 0.033	<W 0.038	<T 0.008	
00067018	0.594	0.057	0.339	<T 0.044	0.068	<W 0.038	<T 0.007	
00066006	0.397	0.074	0.202	0.119	0.068	0.281	<T 0.004	
00066017	0.334	0.039	0.110	0.132	0.095	0.236	<T 0.003	
00066081	0.621	0.122	0.191	0.199	0.065	<T 0.213	<T 0.008	
00066084	0.545	0.086	0.186	0.239	0.107	<W 0.061	<W 0.003	
00106122	****	****	****	****	****	****	****	****
00024692	0.229	0.063	0.333	<T 0.092	0.048	<T 0.050	0.007	
00024701	0.157	0.015	0.076	<T 0.052	0.042	<T 0.030	0.008	
00024719	0.244	0.046	0.101	<W 0.006	0.053	0.044	0.016	
00094679	0.444	0.066	0.206	0.075	0.053	0.059	0.011	
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL	
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00067020	****	****	****	****	****	****	****	****
00067012	<T 0.0057	0.004	0.00227	<T 0.0017	0.0246	0.00811	1.1300	
00067018	<T 0.0047	0.004	0.00207	<T 0.0011	0.0368	0.01072	0.9764	
00066006	0.0091	0.003	0.00264	<T 0.0010	0.0198	0.00942	0.7934	
00066017	<T 0.0070	<T 0.001	<T 0.00097	<W 0.0007	0.0181	0.00039	0.8370	
00066081	0.0131	0.005	0.00788	<T 0.0026	0.0298	0.01416	1.6663	
00066084	<T 0.0151	<T 0.002	0.00575	<T 0.0024	0.0242	0.01199	1.4016	
00106122	****	****	****	****	****	****	****	****
00024692	0.0053	<T 0.001	<T 0.00161	0.0014	0.0135	0.00849	0.9405	
00024701	0.0029	<T 0.000	<T 0.00072	<T 0.0002	LG 0.0064	0.00677	0.5437	
00024719	0.0050	0.002	<T 0.00147	0.0012	0.0147	<T 0.00061	0.4518	
00094679	0.0049	0.002	<T 0.00110	0.0010	0.0154	0.00373	0.5811	

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

----- REGION=CE STATION=DORSET LOVOL SITE NO.1 -----

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
00076050	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	0906	1000	1	86109	1
00047992	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	0925	0908	1	85298	
00077042	AP02521	AS	02	01	MAR 22, 1988	FEB 23, 1988	0850	0929	1	87732	
00076067	AP02589	AS	02	01	APR 19, 1988	MAR 22, 1988	1030	0900	1	85539	
00076074	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0901	1040	1	84799	
00076080	AP02628	AS	02	01	JUN 14, 1988	MAY 17, 1988	1040	0902	1	85269	
00043700	AP02798	AS	02	01	JUL 12, 1988	JUN 14, 1988	0827	1100	1	83851	
00043706	AP02798	AS	02	01	AUG 9, 1988	JUL 12, 1988	0930	0830	1	54425	
00043712	AP02798	AS	02	01	SEP 6, 1988	AUG 9, 1988	1140	1700	1	69918	
00043718	AP02865	AS	02	01	OCT 4, 1988	SEP 6, 1988	1000	1143	1	79526	
00043724	AP02896	AS	02	01	NOV 1, 1988	OCT 4, 1988	0815	1000	1	84969	
00043730	AP02952	AS	02	01	NOV 29, 1988	NOV 1, 1988	0845	0815	1	84464	
00043736	AP02986	AS	02	01	DEC 28, 1988	NOV 29, 1988	0944	0845	1	89320	
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX	SULFATE	NITRIC	NITRATE		CALCIUM		
	2			UG/M3	UG/M3	UG/M3	UG/M3		UG/M3		
00076050				8.06	2.51	0.180	0.348		0.193		
00047992				RRV 7.82	2.23	RRV 0.203	0.264		0.047		
00077042				4.90	2.07	0.123	0.256		0.101		
00076067				3.49	3.09	0.144	0.228	<T	0.070		
00076074				D 2.54	2.31	0.071	0.218	<W	0.024		
00076080				2.42	2.76	0.065	0.164	<W	0.023		
00043700				2.41	5.63	0.265	<T	0.018	0.499		
00043706		AC		1.32	4.15	0.217	<T	0.028	0.314		
00043712		CA		<W 0.21	LG 0.24	LG 0.034	<T	0.021	0.076		
00043718		C		2.46	2.97	0.168	<T	0.013	0.167		
00043724				3.68	1.85	0.169	0.029		0.117		
00043730		Q		4.46	2.64	0.317	<T	0.030	0.072		
00043736		Q		5.34	2.15	0.242	0.162		0.100		

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=CE STATION=DORSET LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00076050	0.383	0.048	0.229	0.053	0.046	0.015	0.003
00047992	0.258	0.040	0.199	0.051	0.045	0.006	0.004
00077042	0.211	0.025	0.182	0.046	0.039	0.045	0.002
00076067	0.251	0.037	0.355	<T 0.036	<W 0.006	<W 0.023	<T 0.002
00076074	0.183	0.024	0.088	<W 0.012	0.040	<W 0.024	<T 0.003
00076080	0.188	0.033	0.096	0.072	0.156	<W 0.023	<T 0.002
00043700	<W 0.012	0.080	0.039	0.310	0.358	0.157	BL ****
00043706	<W 0.018	0.064	0.028	0.184	0.239	0.089	BL ****
00043712	<W 0.014	<W 0.004	<W 0.004	<W 0.007	LG 0.004	LG 0.004	BL ****
00043718	<W 0.013	0.047	0.031	<T 0.029	0.045	0.025	BL ****
00043724	<W 0.012	<W 0.006	0.177	0.060	0.044	<T 0.027	0.006
00043730	<W 0.012	0.041	0.047	<T 0.037	0.032	<T 0.021	0.011
00043736	<T 0.022	0.036	0.132	<W 0.006	0.017	<T 0.028	0.009
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMİUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00076050	0.0029	0.002	0.00058	0.0008	0.0106	0.00295	0.7084
00047992	0.0029	0.003	0.00481	0.0008	0.0328	0.01039	RRV 0.8324
00077042	0.0023	0.003	0.00228	0.0006	0.0131	0.01040	0.7443
00076067	<T 0.0029	0.002	0.00175	<T 0.0011	0.0120	0.00360	0.8183
00076074	<T 0.0053	0.002	0.00259	<W 0.0006	0.0142	0.00778	0.9410
00076080	0.0076	0.002	0.00281	<T 0.0009	0.0100	0.00800	0.7975
00043700	0.0101	0.003	<T 0.00060	0.0012	0.0131	<T 0.00012	0.8587
00043706	0.0066	0.002	<W 0.00037	<T 0.0007	0.0088	<T 0.00018	0.5696
00043712	<T 0.0001	<T 0.000	<T 0.00043	<W 0.0001	<T 0.0010	<W 0.00007	0.3004
00043718	0.0021	0.002	<W 0.00025	<T 0.0003	0.0069	<T 0.00013	0.5156
00043724	0.0032	<T 0.001	<T 0.00129	<T 0.0005	0.0093	<T 0.00035	0.3766
00043730	0.0027	0.002	<T 0.00083	0.0007	0.0112	<T 0.00024	0.5801
00043736	0.0022	0.002	<T 0.00078	<T 0.0006	0.0099	<T 0.00045	0.6270

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

----- REGION=CE STATION=UXBRIDGE LOVOL SITE NO.1 -----

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
000106284	AP03369	AS	02	01	JUN 14, 1988	MAY 17, 1988	0800	0800	1	-	1
00084182	AP02443	AS	02	01	JAN 26, 1988	DEC 30, 1987	0840	1330	1	81340	
00084079	AP02537	AS	02	01	FEB 23, 1988	JAN 26, 1988	0730	0840	1	82010	
00084252	AP02537	AS	02	01	MAR 22, 1988	FEB 23, 1988	0645	0730	1	81880	
00084314	AP02550	AS	02	01	APR 20, 1988	MAR 22, 1988	1400	0645	1	77806	
00084407	AP02609	AS	02	01	MAY 17, 1988	APR 20, 1988	0800	1400	1	85552	
00084499	AP02696	AS	02	01	JUL 12, 1988	JUN 14, 1988	0715	0600	1	82432	
00084576	AP02746	AS	02	01	AUG 9, 1988	JUL 12, 1988	0920	0750	1	79058	
00084765	AP02760	AS	02	01	SEP 6, 1988	AUG 9, 1988	0625	0920	1	68309	
00084825	AP02891	AS	02	01	OCT 4, 1988	SEP 6, 1988	0645	0630	1	3297	
00084903	AP02870	AS	02	01	NOV 1, 1988	OCT 4, 1988	1710	0645	1	74540	
00041017	AP02915	AS	02	01	NOV 29, 1988	NOV 1, 1988	1035	1710	1	76159	
00042130	AP02950	AS	02	01	DEC 29, 1988	NOV 29, 1988	0705	1035	1	80800	
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE		NITRIC	NITRATE	CALCIUM	
	2				UG/M3	UG/M3		UG/M3	UG/M3	UG/M3	
00106284	F				****	****		****	****	****	
00084182	A				14.04	3.32		0.083	0.701	0.867	
00084079					10.57	3.19	LG	0.024	0.658	0.168	
00084252					6.73	2.25		0.073	0.458	0.230	
00084314	Q			LG	1.37	1.13	<T	0.006	LG	0.270	0.244
00084407	CA				2.44	2.49		0.150	0.362		0.295
00084499					2.75	4.09	LG	0.030	0.394	<T	0.115
00084576				LG	1.43	1.95		0.070	0.108	<W	0.025
00084765					4.33	4.83		0.132	0.271		0.527
00084825	A	F	UG	46.20	UG	41.25	UG	1.699	UG	4.246	UG 7.886
00084903					3.88	1.48		0.070	0.262		0.310
00041017	A				4.97	2.14		0.081	0.440		0.210
00042130		Z			2.55	LG	0.75	0.045	LG	0.198	0.136

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=CE STATION=UXBRIDGE LOVOL SITE NO.1

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00106284	****	****	****	****	****	****	****
00084182	0.645	0.087	0.388	UG 0.254	UG 0.252	0.148	D 0.017
00084079	0.628	0.054	0.328	0.064	0.060	0.019	0.005
00084252	0.531	0.027	0.305	0.060	0.071	0.029	0.003
00084314	B 0.174	0.039	0.116	<T 0.055	<T 0.014	<W 0.026	0.007
00084407	0.263	LG 0.030	0.083	<T 0.017	0.098	<W 0.023	<T 0.003
00084499	0.279	0.053	0.112	0.115	0.069	<W 0.024	0.008
00084576	0.443	LG 0.021	0.073	0.068	0.040	<W 0.025	<W 0.001
00084765	0.234	0.093	0.270	0.143	<T 0.036	0.167	0.012
00084825	UG 4.853	<T 0.152	UG 2.275	UG 2.062	UG 1.092	<T 0.789	UG 0.249
00084903	0.215	0.030	0.094	<T 0.051	0.048	0.043	BL ****
00041017	0.263	0.016	0.368	0.095	0.060	<T 0.038	0.013
00042130	0.260	0.022	0.121	<T 0.035	0.024	<T 0.016	0.005
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00106284	****	****	****	****	****	****	****
00084182	UG 0.0154	0.003	0.00246	0.0011	0.0357	0.00025	0.6147
00084079	0.0049	B 0.011	0.00415	0.0010	0.0317	0.01464	0.3268
00084252	0.0037	0.005	0.00208	0.0006	0.0177	0.01463	0.6900
00084314	<T 0.0032	<T 0.001	0.00141	<T 0.0013	0.0180	0.00907	LG 0.1902
00084407	0.0099	0.002	0.00234	<T 0.0007	0.0234	0.00923	0.8568
00084499	0.0091	0.003	0.00230	<T 0.0008	0.0303	0.00582	0.7946
00084576	<T 0.0025	0.002	0.00544	<T 0.0009	0.0101	0.00569	0.8348
00084765	<T 0.0073	0.005	0.00439	<T 0.0012	0.0220	0.00117	1.0877
00084825	UG 0.0849	UG 0.042	<T 0.01213	<T 0.0061	UG 0.2396	<T 0.00607	UG 12.4355
00084903	0.0042	<T 0.001	<W 0.00027	<T 0.0005	0.0098	<T 0.00027	0.6439
00041017	0.0047	0.002	<T 0.00118	<T 0.0007	0.0158	<T 0.00039	0.8797
00042130	LG 0.0021	<T 0.001	<W 0.00025	<T 0.0001	LG 0.0057	<T 0.00025	0.5446

PART IV

NORTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=GOWGANDA LOVOL SITE NO.1

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE		NITRIC	NITRATE	CALCIUM	
00081131	AP02482	AS 02	02	01	JAN 26, 1988	DEC 29, 1987	1020	1010	1	92311	
00081163	AP02498	AS 02	02	01	FEB 23, 1988	JAN 26, 1988	1035	1020	1	89877	
00081194	AP02544	AS 02	02	01	MAR 22, 1988	FEB 23, 1988	1025	1035	1	92122	
00081223	AP02566	AS 02	02	01	APR 19, 1988	MAR 22, 1988	0908	1025	1	88132	
00081254	AP02612	AS 02	02	01	MAY 17, 1988	APR 19, 1988	0710	0908	1	85698	
00081291	AP02635	AS 02	02	01	JUN 14, 1988	MAY 17, 1988	0710	0710	1	86037	
00081333	AP02689	AS 02	02	01	JUL 12, 1988	JUN 14, 1988	0807	0710	1	90311	
00081377	AP02741	AS 02	02	01	AUG 9, 1988	JUL 12, 1988	0703	0807	1	77821	
00081435	AP02915	AS 02	02	01	SEP 6, 1988	AUG 9, 1988	0850	0703	1	91330	
00081471	AP02864	AS 02	02	01	OCT 4, 1988	SEP 6, 1988	0841	0850	1	91736	
00081503	AP02915	AS 02	02	01	NOV 1, 1988	OCT 4, 1988	0829	0841	1	88070	
00081527	AP02919	AS 02	02	01	NOV 29, 1988	NOV 1, 1988	0905	0829	1	81622	
00081561	AP02947	AS 02	02	01	DEC 27, 1988	NOV 29, 1988	0845	0905	1	81796	
					UG/M3	UG/M3		UG/M3		UG/M3	
00081131					6.78	1.95		0.095		0.276	0.021
00081163					10.43	2.28		0.137		0.161	0.022
00081194					4.50	1.68		0.049		0.163	0.022
00081223					6.30	2.56		0.091		0.068	<W 0.023
00081254					2.11	1.89		0.035		0.117	<W 0.023
00081291					2.47	1.43		0.029		0.081	0.221
00081333					1.88	2.92		0.072		0.122	<W 0.022
00081377					1.68	2.39		0.071		0.096	<W 0.026
00081435					2.53	2.78		0.066		0.060	0.131
00081471					2.50	2.56		0.063		0.087	0.211
00081503					3.90	1.64		0.075		0.125	0.136
00081527					5.79	2.32		0.137		0.110	<T 0.033
00081561					5.05	1.70		0.068		0.183	0.083

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=GOWGANDA LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081131	0.309	0.031	0.200	0.028	0.011	UG 0.380	0.003
00081163	0.217	0.036	0.159	0.036	0.029	0.018	0.003
00081194	0.347	0.021	0.251	0.045	0.055	0.030	0.002
00081223	0.199	0.028	0.130	<T 0.030	0.053	<W 0.023	<T 0.003
00081254	0.123	0.022	0.082	<W 0.012	0.081	<W 0.023	<T 0.002
00081291	0.169	0.043	0.069	0.256	0.221	0.360	<W 0.001
00081333	0.188	0.050	0.075	0.177	0.199	0.255	<W 0.001
00081377	0.148	0.052	0.071	0.109	0.231	<W 0.026	0.008
00081435	0.099	0.008	0.060	0.076	0.076	0.046	0.004
00081471	0.098	0.049	0.180	0.087	0.120	0.062	JBL ****
00081503	0.102	<T 0.009	0.253	0.059	0.064	0.044	0.009
00081527	0.086	0.021	0.119	<W 0.006	0.021	<T 0.020	0.010
00081561	0.379	0.037	0.321	<T 0.037	0.026	0.038	0.009
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081131	0.0022	0.002	0.00108	0.0003	0.0084	0.00190	0.5308
00081163	0.0033	0.007	0.00512	0.0006	0.0295	0.00823	0.6042
00081194	0.0022	0.007	0.00369	0.0005	0.0125	0.01148	0.4722
00081223	<T 0.0023	0.004	0.00125	<W 0.0006	0.0142	0.00414	1.0586
00081254	<T 0.0035	0.005	0.00385	<W 0.0006	0.0099	0.00363	0.5601
00081291	0.0070	0.004	<T 0.00105	<T 0.0007	<T 0.0041	0.00186	0.6253
00081333	0.0066	0.007	0.00144	<W 0.0006	0.0105	0.00022	0.6400
00081377	<T 0.0045	0.006	0.00398	<W 0.0006	0.0103	0.00180	0.8841
00081435	0.0035	0.004	<T 0.00099	<T 0.0003	0.0070	<T 0.00022	0.4599
00081471	0.0045	0.004	<T 0.00065	<T 0.0004	0.0068	<T 0.00022	0.4687
00081503	0.0035	0.002	<T 0.00102	<T 0.0005	0.0093	<T 0.00045	0.4996
00081527	0.0021	0.003	<T 0.00135	<T 0.0004	0.0110	0.00074	1.0046
00081561	0.0021	0.003	<T 0.00061	<T 0.0004	0.0092	<T 0.00049	0.5991

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=KILLARNEY LOVOL SITE NO.1

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
00081137	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1055	1107	1	76620	
00081170	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	1100	1055	1	75350	
00081201	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1115	1100	1	19720	
00081230	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	1525	1115	1	78250	
00081261	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1012	1525	1	78570	
00081298	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	0945	1012	1	79340	
00081340	AP02689	AS	02	01	JUL 12, 1988	JUN 14, 1988	0905	0945	1	75270	
00081384	AP02741	AS	02	01	AUG 9, 1988	JUL 12, 1988	0830	0905	1	77770	
00081442	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	0840	0830	1	78530	
00081478	AP02864	AS	02	01	OCT 4, 1988	SEP 6, 1988	1230	0840	1	79900	
00081510	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1300	1230	1	81080	
00081535	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1515	1300	1	77100	
00081568	AP02947	AS	02	01	DEC 28, 1988	NOV 29, 1988	0930	1515	1	85280	
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX	SULFATE	NITRIC		NITRATE		CALCIUM	
	2			UG/M3	UG/M3	UG/M3		UG/M3		UG/M3	
00081137				8.11	1.58	0.163		0.372		0.174	
00081170				7.75	1.34	0.166		0.252		0.027	
00081201	A	F	U	4.87	U	3.02	U	0.431	U	0.101	
00081230	B		D	13.05	UG	3.54		0.243	<T	0.051	
00081261			B	9.31	2.62	0.067		0.229	<T	0.112	
00081298				7.31	2.76	0.044		0.195		0.164	
00081340				2.80	3.68	0.073		0.219	<W	0.027	
00081384				1.77	4.81	0.106		0.116	D	0.399	
00081442				4.31	3.62	0.097		0.127		0.166	
00081478				7.46	3.48	0.120		0.188		0.319	
00081510				7.94	1.89	0.121		0.204		0.123	
00081535				3.43	1.57	0.117		0.220	<T	0.043	
00081568	B			9.13	1.95	0.120		0.287		0.164	

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=KILLARNEY LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081137	0.398	0.042	0.202	0.052	0.030	0.028	0.002
00081170	0.358	0.021	0.113	0.053	0.040	0.019	0.003
00081201	U 0.583	U 0.028	U 0.317	U 0.061	U 0.013	U 0.066	U 0.003
00081230	0.249	0.032	0.134	0.109	0.101	<W 0.026	0.007
00081261	0.204	0.031	0.100	0.180	0.218	<W 0.025	<T 0.005
00081298	0.221	0.062	0.090	0.214	0.189	0.290	D 0.007
00081340	0.219	0.053	0.083	0.159	0.159	0.292	<W 0.001
00081384	0.206	0.050	0.091	0.141	0.180	<T 0.094	0.012
00081442	0.140	<T 0.008	0.083	<T 0.056	0.060	0.045	0.009
00081478	0.163	0.047	0.197	0.095	0.114	0.066	IBL ****
00081510	0.148	<T 0.015	0.210	<T 0.030	0.035	<T 0.033	0.010
00081535	0.104	0.026	0.081	<W 0.006	0.018	<T 0.018	0.006
00081568	0.258	0.053	0.182	0.069	0.059	0.056	0.011
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081137	0.0020	0.002	0.00026	0.0007	0.0082	0.00255	0.6330
00081170	0.0027	0.003	0.00717	0.0009	0.0139	0.01952	D 1.2780
00081201	U 0.0051	U 0.007	U 0.01673	U 0.0010	U 0.0649	U 0.03514	U 1.5619
00081230	<T 0.0045	0.007	D 0.00345	<W 0.0006	0.0153	0.00722	0.9431
00081261	<T 0.0064	0.009	D 0.00789	<T 0.0011	0.0159	0.01226	0.8082
00081298	0.0082	B 0.011	D 0.00479	<T 0.0008	0.0082	0.00063	0.7978
00081340	<T 0.0066	0.005	0.00213	<W 0.0007	0.0080	0.00027	0.8104
00081384	<T 0.0045	0.004	0.00437	<W 0.0006	0.0116	0.00193	0.8422
00081442	0.0038	UG 0.007	<T 0.00178	<T 0.0005	0.0099	<T 0.00025	0.5858
00081478	0.0053	0.005	<T 0.00225	<T 0.0005	0.0109	<T 0.00038	UG 0.8636
00081510	0.0030	0.003	<T 0.00185	<T 0.0006	0.0097	<T 0.00062	0.6043
00081535	0.0019	0.002	<T 0.00143	<T 0.0004	0.0069	<T 0.00026	0.5707
00081568	0.0035	0.006	UG 0.00340	<T 0.0005	0.0116	<T 0.00059	0.4925

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=MATTAWA LOVOL SITE NO.1												
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER	
00081135	AP02482	AS	02	01	JAN 26, 1988	DEC 30, 1987	1435	1530	1	78240	1	
00081167	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	1330	1435	1	76780		
00081198	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1420	1330	1	79200		
00081227	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	1440	1420	1	73690		
00081258	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1430	1440	1	78620		
00081295	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1420	1430	1	68900		
00081337	AP02689	AS	02	01	JUL 12, 1988	JUN 14, 1988	1510	1420	1	67830		
00081381	AP02741	AS	02	01	AUG 15, 1988	JUL 12, 1988	1430	1510	1	79270		
00081439	AP02915	AS	02	01	SEP 6, 1988	AUG 15, 1988	1435	1430	1	52390		
00081475	AP02864	AS	02	01	OCT 4, 1988	SEP 6, 1988	1035	1435	1	68880		
00081507	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1405	1035	1	32560		
00081531	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1140	1405	1	61113		
00081565	AP02947	AS	02	01	DEC 29, 1988	NOV 29, 1988	1345	1140	1	99289		
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE		NITRIC		NITRATE	CALCIUM	
	2				UG/M3	UG/M3		UG/M3		UG/M3	UG/M3	
00081135		B			9.26	2.42		0.118		0.345	0.143	
00081167					9.57	2.15		0.088		0.215	0.026	
00081198					6.66	1.68		0.051		0.202	0.074	
00081227					3.37	2.40		0.081		0.163	<T 0.054	
00081258					1.82	B 0.19	LG	0.013		0.045	<W 0.025	
00081295					4.70	2.16		0.044		0.109	<T 0.074	
00081337					2.95	3.89		0.085		0.140	<T 0.097	
00081381		Z			1.85	4.73		0.066		0.082	<W 0.025	
00081439		Z			2.08	2.77		0.034		0.067	0.363	
00081475					3.44	3.18		0.061		0.073	0.336	
00081507		A	F		3.47	2.76		0.074		0.246	0.301	
00081531		A			4.42	2.16		0.049		0.139	0.115	
00081565		Z			8.41	1.87		0.052		0.247	UG 0.252	

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

----- REGION=NE STATION=MATTAWA LOVOL SITE NO.1 -----

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081135	0.409	0.064	0.256	0.061	0.042	0.024	0.007
00081167	0.313	D 0.067	0.246	0.060	0.039	0.014	LG 0.001
00081198	0.303	0.029	0.241	D 0.152	D 0.126	0.042	0.005
00081227	0.210	D 0.041	0.149	0.142	0.138	<W 0.027	<T 0.005
00081258	0.146	<T 0.004	B 0.050	<W 0.013	<T 0.007	<W 0.025	<W 0.001
00081295	0.276	0.054	0.102	0.363	0.276	0.334	<W 0.001
00081337	B 0.457	D 0.066	D 0.103	B 0.604	D 0.634	D 0.501	<W 0.001
00081381	0.259	0.076	0.093	0.315	0.467	<T 0.029	0.010
00081439	0.248	<T 0.014	0.143	UG 0.802	UG 0.764	UG 0.363	0.007
00081475	0.145	0.087	0.145	UG 0.566	UG 0.639	UG 0.261	BL ****
00081507	UG 0.338	<T 0.023	UG 0.868	UG 0.307	0.307	UG 0.147	0.016
00081531	0.115	0.029	0.110	0.180	UG 0.245	0.118	0.012
00081565	0.242	0.060	0.214	0.624	UG 0.645	UG 0.292	0.017
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081135	0.0032	0.004	0.00077	0.0010	0.0106	0.00238	0.6046
00081167	0.0039	0.002	0.00287	0.0008	0.0189	0.02098	0.7033
00081198	0.0051	0.003	0.00215	0.0003	0.0335	0.00484	0.5429
00081227	D 0.0088	0.002	<T 0.00136	<W 0.0007	0.0190	D 0.01122	0.8821
00081258	<W 0.0013	<T 0.001	0.00267	<T 0.0011	<T 0.0017	0.00814	LG 0.3625
00081295	UG 0.0138	0.003	<T 0.00131	<T 0.0009	0.0116	0.00110	0.7155
00081337	B 0.0177	0.003	0.00192	<T 0.0013	D 0.0162	<W 0.00003	0.8226
00081381	0.0107	0.003	0.00353	<T 0.0010	0.0107	0.00120	0.9777
00081439	UG 0.0248	UG 0.006	<T 0.00153	UG 0.0015	0.0130	<T 0.00038	0.5154
00081475	UG 0.0160	0.003	<T 0.00102	UG 0.0012	0.0119	<T 0.00044	0.6243
00081507	UG 0.0126	<T 0.002	<T 0.00154	<T 0.0015	0.0157	<T 0.00092	UG 1.1978
00081531	UG 0.0082	0.002	<T 0.00131	<T 0.0008	0.0113	<T 0.00065	0.5727
00081565	UG 0.0191	0.004	<T 0.00151	UG 0.0016	0.0191	<T 0.00050	0.4633

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=MCKELLAR LOVOL SITE NO.1												
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER	
00081138	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	0815	0845	1	84694		
00081169	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	0840	0815	1	82316		
00081200	AP02544	AS	02	01	MAR 23, 1988	FEB 23, 1988	0840	0840	1	87224		
00081229	AP02566	AS	02	01	APR 19, 1988	MAR 23, 1988	0835	0840	1	77184		
00081260	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0835	0835	1	78806		
00081297	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	0835	0835	1	93163		
00081339	AP02689	AS	02	01	JUL 12, 1988	JUN 14, 1988	0830	0835	1	68979		
00081383	AP02741	AS	02	01	AUG 9, 1988	JUL 12, 1988	0810	0830	1	67694		
00081441	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	0830	0810	1	71228		
00081477	AP02864	AS	02	01	OCT 4, 1988	SEP 6, 1988	0835	0830	1	61837		
00081509	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	0845	0835	1	65827		
00081533	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	0830	0845	1	77639		
00081567	AP02947	AS	02	01	DEC 28, 1988	NOV 29, 1988	0830	0830	1	88653		
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX	SULFATE	NITRIC	NITRATE		CALCIUM			
	2			UG/M3	UG/M3	UG/M3	UG/M3		UG/M3			
00081138				11.87	2.53	0.175	0.413		0.341			
00081169				9.59	2.50	0.213	0.310		0.066			
00081200				6.70	2.08	0.115	0.304		0.109			
00081229				3.77	2.80	0.136	0.285		D 0.518			
00081260				2.54	2.58	0.070	0.228		<W 0.025			
00081297		A		2.34	1.52	0.046	0.097		<W 0.021			
00081339				3.71	3.75	0.101	0.232		<W 0.029			
00081383				3.29	5.19	0.081	0.096		<W 0.030			
00081441				3.91	3.44	0.104	0.119		0.154			
00081477				3.33	3.17	0.136	0.121		0.231			
00081509				6.88	2.01	0.112	UG	0.266	0.152			
00081533				4.81	2.85	0.183	0.283		0.115			
00081567				13.49	2.46	0.167	0.400		0.135			

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

----- REGION=NE STATION=MCKELLAR LOVOL SITE NO.1 -----

SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081138	B 0.614	0.047	0.292	0.087	0.048	0.046	0.004
00081169	0.498	0.038	0.270	0.063	0.067	0.013	0.002
00081200	0.499	0.025	0.288	0.056	0.048	0.042	0.003
00081229	0.292	0.026	0.130	UG 0.244	0.124	D 0.175	<T 0.004
00081260	0.197	0.026	0.085	<W 0.013	0.072	<W 0.025	<T 0.003
00081297	0.134	0.024	LG 0.061	0.118	0.058	0.172	<T 0.001
00081339	0.275	0.043	0.072	0.159	0.159	0.319	<W 0.001
00081383	0.214	0.054	0.083	0.103	0.095	<W 0.030	0.013
00081441	0.140	<T 0.007	LG 0.039	<T 0.055	0.055	<T 0.039	0.008
00081477	0.146	0.049	0.158	0.128	0.071	0.046	IBL ****
00081509	0.152	<T 0.015	0.422	<T 0.052	0.043	<T 0.035	0.010
00081533	0.193	0.032	0.142	<W 0.006	0.033	<T 0.027	0.012
00081567	0.361	0.051	0.243	0.058	0.041	0.042	UG 0.062
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081138	0.0018	0.003	0.00035	0.0008	LG 0.0015	0.00235	0.6966
00081169	0.0030	0.003	0.00340	0.0010	0.0298	0.01115	0.8382
00081200	0.0029	0.005	0.00344	0.0002	0.0126	0.00578	0.6592
00081229	<T 0.0039	0.002	<T 0.00130	<T 0.0008	0.0155	0.00748	B 0.1211
00081260	<T 0.0063	0.002	0.00343	<T 0.0010	0.0127	0.00466	0.8185
00081297	<T 0.0032	0.002	<T 0.00086	<W 0.0005	0.0059	0.00204	0.5206
00081339	<T 0.0058	0.003	<T 0.00087	<W 0.0007	0.0094	<T 0.00006	D 1.6237
00081383	<T 0.0037	B 0.024	0.00458	<W 0.0007	0.0111	0.00177	B 2.1272
00081441	0.0035	0.002	<T 0.00126	<T 0.0004	0.0083	<T 0.00042	0.6458
00081477	0.0042	0.003	<W 0.00032	<T 0.0005	0.0100	<T 0.00016	0.7439
00081509	0.0038	0.002	<T 0.00152	<T 0.0006	0.0102	<T 0.00061	UG 0.8659
00081533	0.0036	0.002	<T 0.00129	0.0008	0.0142	<T 0.00039	0.6826
00081567	0.0035	0.004	<T 0.00169	0.0007	0.0135	<T 0.00056	0.6768

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=MOONBEAM LOVOL SITE NO.1

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE	NITRIC	NITRATE	CALCIUM		
00081139	AP02482	AS	02	01	JAN 26, 1988	DEC 30, 1987	1348	1430	1	81220	
00081171	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	1430	1348	1	77870	
00081202	AP02544	AS	02	01	MAR 23, 1988	FEB 23, 1988	1050	1430	1	87640	
00081231	AP02566	AS	02	01	APR 19, 1988	MAR 23, 1988	1605	1050	1	80250	
00081262	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1445	1605	1	82240	
00081299	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	2145	1445	1	78070	
00081341	AP02689	AS	02	01	JUL 18, 1988	JUN 14, 1988	1655	2145	1	92710	
00081385	AP02741	AS	02	01	AUG 14, 1988	JUL 18, 1988	2045	1655	1	73920	
00081443	AP02915	AS	02	01	SEP 6, 1988	AUG 14, 1988	1635	2045	1	63220	
00081479	AP02864	AS	02	01	OCT 4, 1988	SEP 6, 1988	1855	1635	1	78410	
00081511	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1950	1855	1	81540	
00081534	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1735	1950	1	81683	
00081569	AP02947	AS	02	01	DEC 28, 1988	NOV 29, 1988	1635	1735	1	86716	
					UG/M3	UG/M3	UG/M3	UG/M3	UG/M3		
00081139	A				2.70	1.23	0.037	0.148	B	2.013	
00081171	B				1.66	1.48	0.042	0.096		0.026	
00081202					3.86	1.32	LG 0.014	0.091		0.070	
00081231					1.54	1.97	0.044	0.056	<T	0.062	
00081262					0.58	1.61	LG 0.018	0.073		0.148	
00081299					0.50	1.01	<T 0.010	<T 0.026	D	0.615	
00081341	Q	Z			0.98	1.98	0.030	0.065		0.237	
00081385					0.49	LG 0.86	0.024	0.047	<W	0.027	
00081443		Z			0.83	1.74	<T 0.013	0.055	UG	0.712	
00081479					1.23	1.62	LG 0.023	0.045		0.244	
00081511					1.34	1.23	LG 0.017	0.067		0.147	
00081534					1.52	1.66	0.047	0.073		0.073	
00081569					1.82	1.40	0.030	0.075		0.089	

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRÉCIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

----- REGION=NE STATION=MOONBEAM LOVOL SITE NO.1 -----							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081139	0.259	0.033	0.201	B 1.450	B 0.246	UG 0.430	0.005
00081171	0.218	0.032	0.193	0.030	0.028	0.017	0.002
00081202	0.262	0.025	0.194	0.036	0.031	0.047	LG 0.001
00081231	0.174	0.025	0.168	<T 0.026	0.056	<W 0.025	<T 0.005
00081262	0.170	0.023	0.091	0.063	0.244	<W 0.024	<T 0.002
00081299	0.199	0.036	0.091	0.307	0.359	0.461	<W 0.001
00081341	0.151	0.049	0.073	0.151	0.183	0.313	<W 0.001
00081385	0.169	0.045	0.101	0.126	0.284	<W 0.027	0.011
00081443	0.206	<T 0.008	0.111	0.130	0.174	UG 0.150	0.005
00081479	0.140	0.051	0.166	0.088	0.122	0.065	IBL ****
00081511	0.184	<T 0.020	0.196	<T 0.031	0.034	0.038	0.006
00081534	0.098	0.024	0.116	<W 0.006	0.022	<T 0.026	0.004
00081569	0.254	0.058	0.228	<T 0.029	0.016	0.043	0.006
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081139	0.0025	0.002	LG 0.00012	0.0002	0.0059	0.00177	0.4248
00081171	0.0026	0.003	0.00565	0.0009	0.0186	0.01698	0.4623
00081202	0.0023	0.003	0.00377	0.0006	0.0103	0.01021	0.3937
00081231	<T 0.0031	0.002	<T 0.00125	<W 0.0006	0.0118	0.00621	0.8947
00081262	0.0073	0.006	0.00231	<T 0.0007	0.0091	0.00636	LG 0.3769
00081299	0.0096	0.003	<T 0.00102	<T 0.0009	<T 0.0032	0.00060	LG 0.3049
00081341	<T 0.0054	0.002	0.00334	<W 0.0005	<T 0.0049	0.00012	0.5264
00081385	<T 0.0061	0.002	0.00365	<W 0.0007	<T 0.0054	0.00108	LG 0.3626
00081443	0.0054	0.003	<T 0.00063	<T 0.0005	0.0057	<T 0.00016	0.4113
00081479	0.0048	0.002	<W 0.00026	<T 0.0004	0.0062	<T 0.00013	0.5101
00081511	0.0025	<T 0.001	<T 0.00049	<T 0.0004	0.0067	<T 0.00037	0.4906
00081534	0.0028	0.001	<T 0.00049	<T 0.0002	0.0073	<T 0.00024	0.3550
00081569	0.0022	0.001	<W 0.00023	<T 0.0002	0.0115	<T 0.00058	0.4613

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=MOOSONEE LOVOL SITE NO.1

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE	NITRIC	NITRATE	CALCIUM		
00081140	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	2035	1730	1	84879	1
00081172	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	2030	2035	1	94000	
00081203	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1829	2030	1	94750	
00081232	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	2200	1829	1	92018	
00081263	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1945	2200	1	80185	
00081300	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1827	1945	1	67982	
00081342	AP02689	AS	02	01	JUL 12, 1988	JUN 14, 1988	2030	1827	1	81203	
00081386	AP02741	AS	02	01	AUG 9, 1988	JUL 12, 1988	1810	2030	1	81065	
00081444	AP02915	AS	02	01	SEP 7, 1988	AUG 9, 1988	1838	1810	1	64815	
00081480	AP02864	AS	02	01	OCT 4, 1988	SEP 7, 1988	1800	1838	1	54315	
00081512	AP02915	AS	02	01	NOV 2, 1988	OCT 4, 1988	1730	1800	1	83574	
00081536	AP02919	AS	02	01	DEC 1, 1988	NOV 2, 1988	1230	1730	1	72854	
00081570	AP02947	AS	02	01	DEC 29, 1988	DEC 1, 1988	1215	1230	1	73104	
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE	NITRIC	NITRATE	CALCIUM		
	2				UG/M3	UG/M3	UG/M3	UG/M3	UG/M3		
00081140					0.95	0.95	0.021	0.082	0.071		
00081172					1.15	1.18	0.013	0.053	0.055		
00081203		E			0.58	1.22	0.011	0.053	0.028		
00081232					1.05	2.08	0.030	0.038	<T 0.033		
00081263					0.29	1.09	0.016	0.050	<W 0.025		
00081300		AC			0.86	0.65	<W 0.003	0.037	<T 0.056		
00081342					0.31	0.68	0.012	<T 0.006	<W 0.025		
00081386					0.22	0.43	0.022	<W 0.006	<T 0.065		
00081444		B			0.60	0.63	<T 0.009	<T 0.015	0.355		
00081480		B			1.04	1.05	<T 0.018	0.028	0.153		
00081512					1.48	0.99	0.014	<T 0.024	0.085		
00081536					1.77	1.44	0.019	<T 0.041	0.074		
00081570					1.12	1.14	0.016	0.048	<T 0.057		

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=MOOSONEE LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081140	0.342	0.012	0.247	0.012	0.012	0.034	0.001
00081172	0.372	0.023	0.251	0.021	0.022	0.061	0.002
00081203	0.639	0.013	0.347	0.020	0.013	0.056	0.001
00081232	0.168	0.016	0.196	<T 0.053	0.036	<W 0.022	<T 0.002
00081263	0.193	0.015	LG 0.105	<W 0.012	<T 0.012	<W 0.025	<T 0.002
00081300	0.279	0.017	0.149	<T 0.059	<T 0.028	0.265	<W 0.001
00081342	0.369	0.040	UG 0.259	<T 0.050	<T 0.026	0.259	<W 0.001
00081386	0.265	0.027	0.163	0.068	0.062	<W 0.025	<T 0.006
00081444	0.355	<T 0.008	0.096	<T 0.025	0.034	0.074	0.001
00081480	0.423	0.037	0.322	<W 0.009	0.014	0.050	IBL ****
00081512	0.132	<T 0.006	0.203	<T 0.009	0.016	<T 0.025	0.008
00081536	0.288	0.021	0.244	<W 0.007	0.012	<T 0.036	0.008
00081570	0.287	0.027	0.253	<T 0.021	0.011	0.042	0.005
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081140	0.0009	0.001	0.00012	0.0002	0.0009	0.00181	0.3534
00081172	0.0011	0.002	0.00394	0.0007	0.0080	0.01487	0.3117
00081203	0.0011	0.001	0.00908	0.0007	0.0045	0.01726	0.1953
00081232	<T 0.0016	0.001	<T 0.00109	<W 0.0005	0.0071	0.00517	0.5847
00081263	<T 0.0019	<T 0.001	0.00237	<T 0.0007	<T 0.0016	0.00667	0.3118
00081300	<T 0.0037	<T 0.001	<T 0.00118	<T 0.0029	<W 0.0015	0.00544	0.2692
00081342	<T 0.0049	0.002	<W 0.00025	<W 0.0006	<T 0.0025	<T 0.00004	0.2561
00081386	UG 0.0247	0.002	0.00395	<W 0.0006	<T 0.0031	0.00096	LG 0.1480
00081444	0.0020	0.002	<T 0.00046	<T 0.0002	0.0026	<W 0.00008	0.0926
00081480	0.0011	0.003	<W 0.00037	<W 0.0002	0.0033	<T 0.00018	0.4603
00081512	0.0013	0.001	<W 0.00024	<T 0.0002	0.0035	<T 0.00024	0.4427
00081536	0.0012	<T 0.001	<T 0.00041	<T 0.0001	0.0051	<T 0.00027	0.4667
00081570	0.0011	<T 0.001	<W 0.00027	<T 0.0001	0.0036	<T 0.00014	0.4514

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=TURKEY LAKES LOVOL SITE NO.1											
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
00081136	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1240	1230	1	75131	
00081168	AP02498	AS	02	01	FEB 23, 1988	JAN 26, 1988	1130	1240	1	79768	
00081199	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1000	1130	1	75364	
00081228	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	1210	1000	1	79667	
00081259	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0900	1210	1	80794	
00081296	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1130	0900	1	78707	
00081338	AP02689	AS	02	01	JUL 12, 1988	JUN 14, 1988	1230	1130	1	84515	
00081382	AP02741	AS	02	01	AUG 9, 1988	JUL 12, 1988	1115	1230	1	81820	
00081440	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	1050	1115	1	81858	
00081476	AP02864	AS	02	01	OCT 4, 1988	SEP 6, 1988	1150	1050	1	80673	
00081508	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1250	1150	1	81232	
00081532	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1400	1250	1	81172	
00081566	AP02947	AS	02	01	DEC 27, 1988	NOV 29, 1988	1400	1400	1	74943	
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE	NITRIC	NITRATE		CALCIUM	
	2				UG/M3	UG/M3	UG/M3	UG/M3		UG/M3	
00081136					5.89	1.61	0.093	0.273		0.347	
00081168					4.05	1.72	0.116	0.232		0.058	
00081199		B			1.78	1.54	0.060	0.166	D	0.200	
00081228					2.51	2.10	0.129	0.113	<T	0.044	
00081259					1.43	1.68	0.034	0.105	<W	0.025	
00081296					2.96	2.49	0.038	0.152	<T	0.029	
00081338					2.20	3.49	0.089	0.177	<W	0.024	
00081382					1.20	2.26	0.079	0.086	<W	0.024	
00081440					1.16	2.26	0.061	0.061		0.134	
00081476					0.88	1.88	0.047	0.068		0.212	
00081508					2.26	1.46	0.057	0.142		0.185	
00081532					3.83	2.30	0.163	0.197		0.069	
00081566					2.59	1.47	0.088	0.180		0.100	

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NE STATION=TURKEY LAKES LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081136	0.253	0.025	0.159	0.123	0.053	0.098	0.001
00081168	0.201	0.018	0.144	0.052	B 0.203	D 0.075	0.009
00081199	0.239	0.015	0.141	0.084	0.049	0.092	LG 0.001
00081228	0.276	0.025	0.144	<T 0.057	0.086	<W 0.025	<T 0.004
00081259	0.130	0.024	0.106	<W 0.012	0.068	<W 0.025	<W 0.001
00081296	0.172	0.055	0.095	0.140	0.075	0.229	<W 0.001
00081338	0.189	0.053	0.074	0.118	0.105	0.284	<W 0.001
00081382	0.134	D 0.082	0.074	0.079	0.077	<W 0.024	<T 0.004
00081440	LG 0.073	<T 0.009	LG 0.049	<T 0.017	0.031	<T 0.029	LG 0.002
00081476	0.149	0.050	0.211	0.086	0.108	0.064	BL ****
00081508	0.111	<T 0.015	0.215	<T 0.041	0.034	0.039	0.005
00081532	0.111	0.022	0.077	<W 0.006	0.026	<T 0.020	0.005
00081566	0.227	0.037	0.203	<T 0.048	0.027	<T 0.039	0.006
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00081136	0.0020	0.002	0.00040	0.0004	0.0044	0.00169	0.6429
00081168	D 0.0088	0.004	0.00514	0.0010	0.0313	0.01257	0.6456
00081199	0.0020	0.002	0.00451	0.0004	LG 0.0027	0.00750	0.5215
00081228	<T 0.0044	0.002	<T 0.00113	<W 0.0006	0.0151	0.00468	1.0230
00081259	<T 0.0050	0.002	0.00248	<T 0.0010	<T 0.0028	0.00442	0.6845
00081296	0.0070	0.003	<T 0.00102	<W 0.0006	0.0083	0.00127	0.8322
00081338	<T 0.0059	0.003	<T 0.00035	<W 0.0006	0.0101	<W 0.00002	0.8460
00081382	<T 0.0043	0.009	0.00403	<W 0.0006	0.0079	0.00099	0.7064
00081440	0.0026	<T 0.001	<T 0.00061	<T 0.0004	0.0055	<T 0.00012	0.4887
00081476	0.0045	0.002	<W 0.00025	<T 0.0004	0.0057	<T 0.00012	0.4339
00081508	0.0031	0.002	<T 0.00037	<T 0.0004	0.0063	<T 0.00025	0.5293
00081532	0.0037	0.001	<T 0.00123	<T 0.0005	0.0136	UG 0.01232	0.5544
00081566	0.0027	0.002	<T 0.00040	<T 0.0003	0.0063	<T 0.00013	0.6005

PART V

NORTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NW STATION=DORION LOVOL SITE NO.1												
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER	
00085009	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	0902	0845	1	78764	1	
00085011	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	0908	0906	1	58878		
00085013	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	0935	0911	1	82307		
00085015	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	0922	0942	1	80599		
00085017	AP02628	AS	02	01	MAY 17, 1988	APR 19, 1988	0902	0934	1	82119		
00085019	AP02671	AS	02	01	JUN 14, 1988	MAY 17, 1988	0905	0907	1	80193		
00085021	AP02696	AS	02	01	JUL 12, 1988	JUN 14, 1988	1020	0910	1	80504		
00085023	AP02773	AS	02	01	AUG 9, 1988	JUL 12, 1988	0915	1020	1	78852		
00085025	AP02816	AS	02	01	SEP 6, 1988	AUG 9, 1988	0930	0918	1	64041		
00085027	AP02870	AS	02	01	OCT 4, 1988	SEP 6, 1988	0920	0932	1	73843		
00085029	AP02891	AS	02	01	NOV 1, 1988	OCT 4, 1988	0910	0922	1	81760		
00085031	AP02980	AS	02	01	NOV 29, 1988	NOV 1, 1988	0900	0913	1	82771		
00085033	AP02980	AS	02	01	DEC 28, 1988	NOV 29, 1988	0945	0904	1	88998		
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX	SULFATE	NITRIC	NITRATE	CALCIUM				
	2			UG/M3	UG/M3	UG/M3	UG/M3	UG/M3				
00085009				1.62	1.45	0.038	0.197	0.095				
00085011		A		1.71	1.14	0.076	0.161	0.034				
00085013				0.75	LG 0.16	0.024	<T 0.024	0.024				
00085015				1.11	1.44	0.037	0.068	<W 0.025				
00085017				0.30	0.84	0.021	0.061	<W 0.024				
00085019				1.48	1.45	0.025	0.094	0.324				
00085021				0.45	1.43	0.031	0.087	<W 0.025				
00085023				1.39	0.61	UG 0.114	<T 0.025	<T 0.082				
00085025		A		0.34	0.48	0.020	0.039	<W 0.031				
00085027		A	<W	0.11	0.35	0.016	<T 0.027	0.147				
00085029		B		0.56	0.80	0.020	0.080	0.147				
00085031		B		0.57	1.38	0.046	0.103	0.070				
00085033		Q		1.18	1.16	0.031	0.084	0.076				

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NW STATION=DORION LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00085009	0.260	0.016	0.222	0.027	0.032	D 0.027	0.001
00085011	0.229	0.024	0.162	0.030	0.039	0.020	0.004
00085013	0.140	<W 0.002	0.058	0.029	0.003	0.006	0.001
00085015	0.112	0.012	0.136	<T 0.019	0.054	<W 0.025	<T 0.002
00085017	!CR ***	<T 0.007	0.080	<W 0.012	0.038	<W 0.024	<T 0.005
00085019	0.137	0.037	0.094	0.249	0.474	0.661	<T 0.002
00085021	0.099	0.050	0.080	0.091	0.062	<W 0.025	<T 0.004
00085023	0.082	0.044	0.080	<T 0.053	0.038	0.172	<W 0.001
00085025	0.125	0.020	0.113	<T 0.032	0.242	<W 0.031	<W 0.002
00085027	0.122	0.012	0.132	<T 0.035	0.056	0.037	!BL ***
00085029	0.122	<T 0.018	0.153	<T 0.057	0.050	0.046	0.002
00085031	0.121	0.018	0.121	<T 0.010	0.016	<T 0.024	0.006
00085033	0.202	0.020	0.194	<T 0.024	0.016	0.036	0.007
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00085009	0.0025	0.001	0.00025	0.0003	D 0.0095	0.00250	0.4634
00085011	0.0017	0.003	0.00798	0.0010	0.0051	0.01586	1.1261
00085013	0.0010	D 0.003	0.00668	0.0002	0.0006	0.00870	0.3864
00085015	<T 0.0025	<T 0.001	<T 0.00099	<W 0.0006	0.0093	0.01082	1.0149
00085017	<T 0.0037	<T 0.001	0.00280	<W 0.0006	<W 0.0012	0.00230	0.1741
00085019	0.0087	0.002	<T 0.00087	<T 0.0009	0.0069	0.00474	0.3280
00085021	<T 0.0050	0.004	0.00634	<T 0.0010	UG 0.0646	0.00770	0.3391
00085023	<T 0.0025	0.004	0.00736	<T 0.0013	<W 0.0013	0.00389	0.2536
00085025	<W 0.0016	0.003	0.00453	<W 0.0008	<W 0.0016	0.00066	0.2483
00085027	0.0019	<W 0.000	<W 0.00027	<T 0.0001	0.0019	0.01192	0.1490
00085029	0.0023	<T 0.000	<T 0.00037	<T 0.0001	0.0027	<T 0.00012	0.4892
00085031	0.0016	0.001	<T 0.00048	<T 0.0002	0.0057	<T 0.00048	0.3624
00085033	0.0012	<T 0.001	<T 0.00056	<T 0.0003	0.0042	<T 0.00022	0.3146

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NW STATION=EAR FALLS LOVOL SITE NO.1											
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX		SULFATE	NITRIC	NITRATE	CALCIUM		
	2			UG/M3		UG/M3	UG/M3	UG/M3	UG/M3		
00034300		A			1.04	1.23	0.045	0.145		0.068	
00085601					1.49	0.97	0.069	0.097		0.023	
00085602		A			0.79	1.30	0.031	0.067		0.048	
00085603					1.35	1.11	0.052	0.058	<T	0.039	
00085604					0.54	1.66	0.022	0.111	<W	0.025	
00085605		A	F	U	23.41	U	4.59	D	0.946	U	0.541
00085606		A	F	U	1.25	U	1.70	D	1.020	U	0.680
00085607		A	Z	B	2.56		0.50	<W	0.005	<T	0.026
00085608		C	F		0.36	LG	0.19	<T	0.020	<W	0.013
00085609		C		<T	0.19		0.60	0.020	<T	0.050	0.051
00085610		A			0.50		0.97	0.024		0.071	0.216
00085611		A			0.41	LG	0.31	0.029	0.073	<T	0.068
00085612		Q			1.76		1.44	0.042	0.105		0.081

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NW STATION=EAR FALLS LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM		SODIUM	IRON	ALUMINIUM	MAGNESIUM
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00034300	0.200	<T	0.015	0.150	0.037	0.018	0.014
00085601	0.177		0.019	0.130	0.026	0.029	0.010
00085602	0.209		0.017	D 0.182	0.051	D 0.067	0.032
00085603	0.168		0.013	0.129	<T 0.017	0.059	<W 0.026
00085604	0.142		0.018	0.098	<W 0.012	0.094	<W 0.025
00085605	U 4.595	U	0.203	U 2.838	U 1.000	U 0.251	U 5.676
00085606	U 3.060	U	0.102	U 1.581	U 0.340	U 0.170	U 0.680
00085607	0.206		0.045	0.136	<T 0.090	<W 0.013	<T 0.181
00085608	UG 0.330		0.013	0.116	<W 0.025	0.281	<W 0.051
00085609	0.220		0.030	0.130	<T 0.054	0.088	0.057
00085610	UG 0.261	<T	0.012	UG 0.391	<T 0.109	0.095	<T 0.062
00085611	0.239	<W	0.005	0.147	<T 0.037	0.011	<T 0.015
00085612	0.244		0.028	0.222	<T 0.018	0.024	0.039
SAMPLE NUMBER	MANGANESE	COPPER		NICKEL	VANADIUM	ZINC	CADMİUM
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00034300	0.0009		0.003	B 0.02580	0.0004	0.0015	0.00260
00085601	0.0017		0.001	0.00744	0.0007	0.0074	0.01446
00085602	D 0.0022		0.001	0.00231	0.0002	D 0.0062	0.00779
00085603	<T 0.0026	<T	0.001	<T 0.00129	<T 0.0009	<T 0.0065	0.00862
00085604	0.0068	<T	0.001	0.00222	<T 0.0009	0.0068	0.00253
00085605	U 0.0270	U	0.024	U 0.06216	U 0.0243	U 0.0486	U 0.10270
00085606	U 0.0340	U	0.020	U 0.21081	U 0.0408	U 0.6800	U 0.15641
00085607	<T 0.0033	<T	0.002	0.00797	<T 0.0026	<W 0.0026	D 0.01535
00085608	<W 0.0025	<T	0.003	0.00686	<W 0.0013	UG 0.0381	0.00086
00085609	0.0034	<T	0.000	<W 0.00040	<T 0.0002	0.0052	0.02396
00085610	0.0045	<W	0.000	<T 0.00071	<T 0.0002	0.0031	<T 0.00024
00085611	<T 0.0007	<T	0.001	<W 0.00037	<W 0.0002	<W 0.0002	<T 0.00018
00085612	0.0017	<T	0.001	<T 0.00100	<T 0.0003	0.0059	<T 0.00044

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NW STATION=GERALDTON LOVOL SITE NO.1 -----

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
00032789	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1555	1650	1	95908	1
00032790	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	1715	1555	1	84146	
00032791	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	1655	1715	1	86719	
00032792	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	1400	1655	1	79001	
00032793	AP02628	AS	02	01	MAY 17, 1988	APR 19, 1988	1445	1400	1	81400	
00032794	AP02671	AS	02	01	JUN 14, 1988	MAY 17, 1988	1515	1445	1	80558	
00032795	AP02696	AS	02	01	JUL 13, 1988	JUN 14, 1988	1200	1515	1	68398	
00032796	AP02773	AS	02	01	AUG 9, 1988	JUL 13, 1988	1435	1200	1	81609	
00032797	AP02816	AS	02	01	SEP 6, 1988	AUG 9, 1988	1440	1435	1	85806	
00032798	AP02870	AS	02	01	OCT 4, 1988	SEP 6, 1988	1136	1440	1	82076	
00032799	AP02891	AS	02	01	OCT 31, 1988	OCT 4, 1988	1600	1440	1	82028	
00032800	AP02980	AS	02	01	NOV 29, 1988	OCT 31, 1988	1110	1600	1	89365	
00032801	AP02980	AS	02	01	DEC 28, 1988	NOV 29, 1988	1000	1110	1	29043	
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX	SULFATE	NITRIC	NITRATE	CALCIUM			
	2			UG/M3	UG/M3	UG/M3	UG/M3	UG/M3			
00032789				1.28	1.23	0.039	0.156	0.057			
00032790				1.13	1.31	0.089	0.089	0.036			
00032791				0.50	0.80	<T	0.009	0.046			0.023
00032792				1.31	1.58	0.028	0.032	<W	0.025		
00032793				0.84	0.69	0.034	0.068	<W	0.025		
00032794				1.64	1.43	<T	0.009	0.087	0.273		
00032795	A			0.62	1.33	0.044	0.124	<W	0.029		
00032796	Q	Z		1.46	0.74	0.015	<T	0.018	0.689		
00032797				0.37	0.66	0.015	LG	0.017	<T	0.058	
00032798				0.34	1.02	0.027	0.043	0.224			
00032799	Q			0.60	1.05	0.029	0.085	0.195			
00032800	Q			0.67	1.06	0.045	0.101	0.090			
00032801	A	F		0.83	0.96	0.041	0.121	<T	0.138		

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NW STATION=GERALDTON LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00032789	0.255	0.026	0.210	0.039	0.018	0.014	0.001
00032790	0.143	0.023	0.171	0.030	0.028	0.020	0.001
00032791	0.115	0.016	0.109	0.021	0.011	0.006	0.001
00032792	0.095	<W	0.006	0.070	<T 0.025	<W 0.006	<T 0.002
00032793	0.141	0.018	0.071	<W 0.012	0.052	<W 0.025	<W 0.001
00032794	0.137	0.043	0.102	0.115	0.067	0.360	<W 0.001
00032795	0.117	0.033	0.113	0.085	<T 0.032	<W 0.029	<W 0.001
00032796	0.123	0.036	0.080	0.074	<T 0.020	0.195	<T 0.002
00032797	0.082	0.015	0.093	<T 0.024	0.153	<W 0.023	<T 0.002
00032798	0.097	UG	0.131	<T 0.057	0.078	0.067	IBL ****
00032799	0.158	<T 0.006	0.183	<T 0.061	0.049	0.045	0.001
00032800	0.134	0.017	0.140	<T 0.019	0.015	<T 0.025	0.003
00032801	0.275	<T 0.017	0.250	<T 0.045	0.026	<T 0.034	0.005
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00032789	0.0008	0.001	0.00021	0.0003	0.0024	0.00206	0.4848
00032790	0.0012	0.002	0.00796	0.0007	0.0077	0.00560	0.5170
00032791	0.0012	0.001	0.00334	D 0.0006	0.0006	0.00399	0.3805
00032792	<W 0.0013	<T 0.000	0.00139	<T 0.0013	<T 0.0032	0.00842	0.5253
00032793	<W 0.0012	<T 0.001	0.00209	<W 0.0006	<T 0.0016	0.01075	0.5467
00032794	<T 0.0050	0.002	<T 0.00099	<W 0.0006	<T 0.0031	0.00261	0.3600
00032795	<T 0.0037	0.002	0.00863	<T 0.0013	<T 0.0051	0.00716	0.4459
00032796	<T 0.0031	0.001	0.00368	<T 0.0012	<T 0.0016	0.00647	0.2916
00032797	<W 0.0012	<T 0.001	0.00303	<W 0.0006	<W 0.0012	0.00027	0.2715
00032798	0.0034	0.015	<W 0.00024	<T 0.0002	UG 0.0122	0.01340	0.3411
00032799	0.0028	0.001	<T 0.00037	<T 0.0002	0.0034	<T 0.00037	0.3901
00032800	0.0012	<T 0.001	<W 0.00022	<T 0.0002	0.0057	<T 0.00011	0.3805
00032801	<T 0.0017	<T 0.001	<W 0.00069	<T 0.0003	0.0038	<T 0.00034	0.9297

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

----- REGION=NW STATION=PICKLE LAKE LOVOL SITE NO.1 -----

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE	NITRIC		NITRATE		CALCIUM
	2				UG/M3	UG/M3	UG/M3		UG/M3		UG/M3
00034393					1.66	0.92	D	0.033	D	0.077	0.055
00034394					0.49	0.35	LG	0.016		0.027	0.022
00034395					1.23	0.51		0.020		0.039	0.053
00034396					0.54	0.97		0.012		0.046	0.365
00034398					0.42	1.24		0.023		0.076	D 0.718
00034399		Z			1.40	0.61		0.013		0.062	0.156
00034400	Q	Z			0.19	0.74		0.024		0.073	<W 0.032
00031095	Q	Z			1.23	0.65		0.077	<T	0.012	0.875
00031096	Q				0.29	0.67		0.014		0.036	D 0.505
00031097	Q	Z	<W		0.14	0.51	<T	0.014	<T	0.034	0.294
00031098	A				0.39	0.86		0.015		0.046	0.566
00031099	Q				0.53	1.27		0.036		0.123	UG 0.208
00031100	QA				2.00	1.29		0.033	LG	0.058	0.071

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NW STATION=PICKLE LAKE LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00034393	0.338	<T	0.011	0.178	0.022	0.023	0.001
00034394	0.104	<T	0.007	0.072	0.017	0.003	0.002
00034395	0.184	<T	0.009	0.109	0.035	0.028	0.023
00034396	0.081		0.012	0.093	B 0.203	0.125	D 0.127
00034398	B 0.399	0.033	B	0.249	B 0.528	D 0.600	<W 0.023 <T 0.003
00034399	0.135	0.031		0.083	0.228	0.228	0.363 0.006
00034400	0.154	0.037		0.103	<W 0.016	0.127	<W 0.032 <T 0.005
00031095	0.142	0.037		0.108	D 0.394	D 0.337	D 0.308 <T 0.006
00031096	0.205	0.029		0.101	D 0.303	0.441	D 0.128 <T 0.003
00031097	0.124	0.017		0.100	<T 0.044	0.068	0.053 BL ****
00031098	0.168	<T 0.008		0.153	0.214	0.183	UG 0.124 0.010
00031099	0.259	0.016		0.163	UG 0.106	UG 0.049	0.058 0.010
00031100	0.198	0.020		0.227	<T 0.019	0.016	0.043 0.010
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00034393	0.0006	0.001	0.00033	0.0002	0.0006	0.00221	0.5978
00034394	0.0011	0.002	0.00622	0.0010	0.0093	0.01221	0.4094
00034395	0.0011	0.001	0.00357	0.0002	0.0009	0.01044	0.8530
00034396	<T 0.0029	<T 0.001	0.00151	<T 0.0009	<T 0.0058	0.00680	0.2062
00034398	UG 0.0153	B 0.015	D 0.00470	<T 0.0014	<T 0.0047	0.00642	0.3111
00034399	0.0057	UG 0.008	0.00187	<W 0.0005	<T 0.0019	0.00384	0.6066
00034400	<T 0.0081	UG 0.009	0.00780	<T 0.0010	<T 0.0065	0.00552	LG 0.1341
00031095	0.0065	B 0.018	0.00332	<W 0.0006	<W 0.0012	0.00690	0.2015
00031096	<T 0.0060	B 0.010	0.00229	<T 0.0008	0.0192	0.00035	0.1720
00031097	0.0022	<T 0.001	<W 0.00028	<T 0.0001	0.0030	0.01929	0.1929
00031098	0.0063	0.005	0.00520	<T 0.0005	0.0031	<T 0.00015	0.3363
00031099	0.0022	UG 0.004	<T 0.00117	<T 0.0003	0.0036	<T 0.00013	0.4411
00031100	0.0012	<T 0.001	<T 0.00116	<T 0.0003	0.0045	<T 0.00046	0.4763

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NW STATION=QUETICO CENTRE LOVOL SITE NO.1												
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER	
00032677	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1400	0900	1	85758	1	
00032678	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	0900	1400	1	86868		
00032679	AP02544	AS	02	01	MAR 22, 1988	FEB 23, 1988	0900	0900	1	72618		
00032680	AP02566	AS	02	01	APR 19, 1988	MAR 22, 1988	0900	0900	1	79859		
00032682	AP02628	AS	02	01	MAY 26, 1988	APR 19, 1988	0900	0900	1	107315		
00032683	AP02671	AS	02	01	JUN 14, 1988	MAY 26, 1988	0900	0900	1	51840		
00032684	AP02696	AS	02	01	JUL 12, 1988	JUN 14, 1988	0900	0900	1	80017		
00032685	AP02773	AS	02	01	AUG 9, 1988	JUL 12, 1988	0900	0900	1	73431		
00032686	AP02816	AS	02	01	SEP 6, 1988	AUG 9, 1988	0900	0900	1	79718		
00032687	AP02870	AS	02	01	OCT 4, 1988	SEP 6, 1988	1100	0900	1	79261		
00032688	AP02891	AS	02	01	NOV 1, 1988	OCT 4, 1988	0900	1100	1	60287		
00032689	AP02980	AS	02	01	NOV 29, 1988	NOV 1, 1988	0900	0900	1	28742		
00032690	AP02980	AS	02	01	DEC 28, 1988	NOV 29, 1988	0900	0900	1	85908		
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE		NITRIC		NITRATE	CALCIUM	
	2				UG/M3	UG/M3		UG/M3		UG/M3	UG/M3	
00032677					1.88	0.95		0.058		0.192	0.093	
00032678					1.49	LG	0.12	0.012		0.029	0.023	
00032679	A				0.89	LG	0.41	0.031		0.048	0.028	
00032680	A				1.00		1.50	0.025		0.063	0.188	
00032682	C	Z			0.66		1.10	0.035		0.089	<W 0.019	
00032683		Z	UG		2.37	UG	2.78	0.058	UG	0.203	<W 0.039	
00032684					0.59		1.39	0.050		0.125	<W 0.025	
00032685		DB			1.52		0.83	UG 0.116		0.048	<T 0.116	
00032686			D		0.50	<T	0.04	0.014		0.031	<T 0.048	
00032687			LG		*		1.34	IRE ****		0.057	0.346	
00032688	A				0.42		0.96	0.023		0.108	0.332	
00032689	A	F			0.51	UG	2.71	UG 0.230	UG	0.522	UG 0.303	
00032690					0.26		0.88	UG 0.077		0.105	0.064	

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=NW STATION=QUETICO CENTRE LOVOL SITE NO.1									
SAMPLE NUMBER	CHLORIDE	POTASSIUM		SODIUM		IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00032677	0.361		0.037		0.174	0.047	0.012	0.012	D 0.003
00032678	0.115	<T	0.002	LG	0.051	0.016	0.003	0.006	0.001
00032679	0.186	<T	0.006		0.093	0.016	0.005	0.007	0.001
00032680	0.194		0.013		0.163	0.073	0.097	<T 0.028	<T 0.005
00032682	0.112		0.015		0.075	<W 0.009	0.067	<W 0.019	<W 0.001
00032683	0.203		0.068	UG	0.149	0.251	0.212	0.502	<W 0.002
00032684	0.112		0.056		0.089	<T 0.062	0.047	<W 0.025	<W 0.001
00032685	0.123	D	0.182	B	0.368	0.086	<W 0.007	0.166	<T 0.002
00032686	0.169		0.030	B	0.282	0.064	0.187	<W 0.025	<W 0.001
00032687	0.164		0.050		0.249	0.126	0.177	0.096	IBL ****
00032688	0.182	<T	0.008		0.083	0.158	0.101	0.075	0.003
00032689	0.418	<T	0.026		0.235	<T 0.101	UG 0.038	<T 0.056	0.011
00032690	0.175		0.020		0.151	<T 0.022	0.015	<T 0.027	0.003
SAMPLE NUMBER	MANGANESE	COPPER		NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL	
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00032677	0.0017	LG	0.000	0.00093	0.0002	0.0009	0.00171	0.7031	
00032678	0.0009		0.004	0.00679	0.0007	0.0006	0.01159	0.3051	
00032679	0.0014		0.002	0.00468	0.0003	0.0007	0.00552	0.7891	
00032680	<T 0.0031		0.002	<T 0.00125	<T 0.0009	0.0075	0.00900	0.8515	
00032682	0.0051	<T	0.001	0.00168	<W 0.0005	<T 0.0047	0.00576	0.6290	
00032683	<T 0.0096		0.003	0.00212	<W 0.0010	<T 0.0087	0.00849	0.4630	
00032684	<T 0.0056	<T	0.001	0.00687	<T 0.0009	<T 0.0062	0.01375	0.3937	
00032685	<T 0.0048		0.002	0.00436	<T 0.0014	<T 0.0068	0.00644	0.3309	
00032686	<T 0.0031		0.003	0.00339	<W 0.0006	<W 0.0013	0.00049	0.1668	
00032687	0.0066	<T	0.001	<T 0.00088	<T 0.0005	0.0047	0.01388	IRE ****	
00032688	0.0060	<T	0.001	<T 0.00249	<T 0.0003	0.0040	<T 0.00017	0.2820	
00032689	UG 0.0035	<T	0.002	<T 0.00104	<T 0.0003	0.0090	<T 0.00035	<W 0.0348	
00032690	0.0015	<T	0.000	<W 0.00023	<T 0.0002	0.0028	<T 0.00023	<W 0.0116	

PART VI

SOUTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

----- REGION=SE STATION=CLOYNE LOVOL SITE NO.1 -----											
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
00024670	AP02467	AS	02	01	JAN 26, 1988	DEC 29, 1987	1600	1800	1	81542	1
00067014	AP02566	AS	02	01	FEB 23, 1988	JAN 26, 1988	1730	1600	1	89990	
00067022	AP02566	AS	02	01	MAR 23, 1988	FEB 23, 1988	1600	1730	1	92451	
00066012	AP02635	AS	02	01	APR 19, 1988	MAR 23, 1988	0740	1730	1	77375	
00024677	AP02783	AS	02	01	MAY 17, 1988	APR 19, 1988	0720	0740	1	74668	
00024678	AP02783	AS	02	01	JUN 14, 1988	MAY 17, 1988	0725	0720	1	71307	
00024679	AP02783	AS	02	01	JUL 12, 1988	JUN 14, 1988	0720	0725	1	61287	
00024680	AP02783	AS	02	01	AUG 9, 1988	JUL 12, 1988	0835	0720	1	79234	
00024681	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	1700	0835	1	79070	
00024682	AP02915	AS	02	01	OCT 4, 1988	SEP 6, 1988	0700	1700	1	79312	
00024683	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	0700	0700	1	83422	
00024684	AP02994	AS	02	01	DEC 10, 1988	NOV 1, 1988	0900	0700	1	118212	
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE	NITRIC	NITRATE		CALCIUM	
	2				UG/M3	UG/M3	UG/M3	UG/M3		UG/M3	
00024670					4.99	3.63	0.163	0.466		0.316	
00067014					10.13	3.36	0.226	0.417	<T	0.089	
00067022		Q			6.00	4.27	0.124	0.411		0.130	
00066012		Q			2.70	B	9.24	0.094	0.614	<W	0.026
00024677					3.84	3.15	0.097	0.241		0.256	
00024678					4.81	4.42	0.123	0.238		0.319	
00024679		AB			2.50	8.73	0.086	0.424		0.363	
00024680					4.56	7.51	0.101	0.133		0.274	
00024681					3.04	6.51	0.144	0.133		0.190	
00024682		B			4.85	4.77	0.164	0.158		0.202	
00024683				LG	1.24	3.09	0.074	0.264		0.180	
00024684		Q	Z		7.13	2.92	0.161	0.393		0.135	

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SE STATION=CLOYNE LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00024670	0.601	0.099	0.364	0.074	0.077	0.063	0.006
00067014	0.506	0.089	0.394	<T	0.037	0.033	<W 0.022
00067022	0.416	B 3.418	0.303	0.061	0.054	<T 0.046	<T 0.005
00066012	0.407	U 79.742	0.212	0.120	0.057	0.233	<W 0.001
00024677	0.321	B 0.524	0.112	0.157	0.073	<T 0.122	<T 0.003
00024678	0.316	0.097	0.108	0.169	0.082	0.164	<T 0.007
00024679	0.457	UCS 10.190	0.130	0.171	0.076	0.192	<T 0.005
00024680	0.208	0.112	0.100	0.131	0.057	<T 0.117	<T 0.003
00024681	0.190	0.177	0.639	0.120	0.092	0.052	0.009
00024682	0.189	0.044	0.255	0.119	0.087	0.053	0.011
00024683	0.168	UG 1.732	0.252	0.074	0.053	<T 0.036	0.009
00024684	0.169	0.171	0.102	0.056	0.033	0.033	0.009
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00024670	0.0055	0.004	0.00208	0.0017	0.0196	0.00335	0.6720
00067014	<T 0.0056	0.002	0.00156	<T 0.0016	0.0217	0.00570	0.6612
00067022	0.0092	0.003	0.00119	<T 0.0006	UG 0.0427	0.00498	0.8848
00066012	UG 0.0142	0.002	B 0.00775	<T 0.0028	0.0233	0.00517	2.2359
00024677	0.0080	0.002	0.00308	<T 0.0012	0.0161	0.00730	0.8571
00024678	0.0091	0.003	0.00323	<T 0.0013	0.0224	0.00991	0.9648
00024679	<T 0.0082	B 0.009	0.00441	<T 0.0011	0.0179	0.00848	1.1748
00024680	0.0069	0.003	0.00316	<T 0.0010	0.0240	0.00814	1.4640
00024681	0.0053	0.001	<T 0.00114	<T 0.0005	0.0139	0.01037	1.0750
00024682	0.0057	0.002	<T 0.00126	<T 0.0005	0.0151	0.01147	0.7565
00024683	0.0042	<T 0.001	<T 0.00108	0.0007	0.0132	0.01115	0.8751
00024684	0.0038	0.002	<T 0.00118	0.0011	0.0152	0.00313	1.0033

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

----- REGION=SE STATION=DALHOUSIE MILLS LOVOL SITE NO.1 -----											
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
00024669	AP02467	AS	02	01	JAN 26, 1988	DEC 29, 1987	0800	0800	1	88133	1
00067011	AP02566	AS	02	01	FEB 23, 1988	JAN 26, 1988	0800	0800	1	88482	
00067009	AP02566	AS	02	01	MAR 22, 1988	FEB 23, 1988	0800	0800	1	87282	
00066009	AP02635	AS	02	01	APR 19, 1988	MAR 22, 1988	0800	0800	1	86867	
00066015	AP02635	AS	02	01	MAY 17, 1988	APR 19, 1988	0800	0800	1	86480	
00066085	AP02783	AS	02	01	JUN 14, 1988	MAY 17, 1988	1730	0900	1	87253	
00066086	AP02783	AS	02	01	JUL 12, 1988	JUN 14, 1988	0800	1730	1	87515	
00066087	AP02783	AS	02	01	AUG 9, 1988	JUL 12, 1988	0800	0800	1	84932	
00024695	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	2000	0900	1	12602	
00024694	AP02915	AS	02	01	OCT 4, 1988	SEP 8, 1988	0800	2000	1	1528	
00094681	AP02994	AS	02	01	DEC 28, 1988	NOV 29, 1988	0800	1100	1	-	
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX	SULFATE	NITRIC	NITRATE		CALCIUM		
2				UG/M3	UG/M3	UG/M3	UG/M3		UG/M3		
00024669				UG 14.91	3.71	0.082	0.857		0.857		
00067011				9.84	3.57	0.167	0.735		0.396		
00067009				7.67	LG 0.28	0.066	0.659		0.859		
00066009				3.17	3.73	0.081	0.737		0.518		
00066015	C			2.30	2.83	0.052	0.382		0.694		
00066085	D			3.64	3.82	0.083	0.315		1.197		
00066086	QD			2.98	6.34	0.066	0.274		1.600		
00066087	D			3.52	5.84	0.100	0.259		1.097		
00024695	C	F	UG	7.96	13.73	0.254	0.913	UG	7.935		
00024694	A	FZ	UG	19.63	7.85	<T 0.393	<T 1.636	<T	2.094		
00094681	A			****	****	****	****		****		

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SE STATION=DALHOUSIE MILLS LOVOL SITE NO.1

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SE STATION=GOLDEN LAKE LOVOL SITE NO.1

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
00024668	AP02467	AS	02	01	JAN 25, 1988	DEC 29, 1987	0720	0700	1	96139	1
00067010	AP02566	AS	02	01	FEB 23, 1988	JAN 25, 1988	0830	0725	1	78688	
00066010	AP02635	AS	02	01	MAR 23, 1988	FEB 23, 1988	0700	0830	1	81909	
00066011	AP02635	AS	02	01	APR 19, 1988	MAR 23, 1988	0700	0705	1	70607	
00066088	AP02783	AS	02	01	JUN 14, 1988	MAY 17, 1988	0730	0705	1	68623	
00024696	AP02915	AS	02	01	JUL 12, 1988	JUN 14, 1988	0700	0735	1	60141	
00024697	AP02915	AS	02	01	AUG 15, 1988	JUL 12, 1988	1830	0700	1	57657	
00106128	AP03182		02	01	NOV 28, 1988	AUG 15, 1988	0800	1830	1	-	
00094683	AP02994	AS	02	01	DEC 28, 1988	NOV 28, 1988	0800	0800	1	32882	
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE	NITRIC		NITRATE	CALCIUM	
	2				UG/M3	UG/M3	UG/M3		UG/M3	UG/M3	
00024668		Q		UG	14.07	2.95	0.156		0.359	0.140	
00067010					7.10	2.64	0.163		0.343	<T	0.076
00066010		Q			5.18	1.94	0.113		0.250	<W	0.024
00066011					2.83	3.06	0.099		0.340	<W	0.028
00066088					4.43	2.40	0.055	<T	0.029	<T	0.043
00024696					2.81	4.77	0.083		0.108		0.266
00024697		Q	Z		1.88	5.36	0.073	<T	0.026		0.173
00106128		AF	Z		****	****	****		****		****
00094683		A	FZ		6.51	2.46	0.091		0.441		0.210

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SE STATION=GOLDEN LAKE LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00024668	0.374	0.071	0.247	0.046	0.035	0.050	0.005
00067010	0.375	0.064	0.273	0.072	<T 0.026	<W 0.025	<T 0.006
00066010	0.330	0.062	0.220	<T 0.052	<T 0.020	0.220	<T 0.004
00066011	0.283	0.074	0.155	<T 0.065	0.042	0.212	<T 0.005
00066088	0.262	0.059	0.108	0.134	D 0.066	0.148	<T 0.003
00024696	0.266	0.029	0.133	0.153	0.135	0.085	0.004
00024697	0.139	0.030	0.715	0.090	0.090	0.059	0.006
00106128	****	****	****	****	****	****	****
00094683	0.380	0.061	0.243	<T 0.073	0.049	<T 0.070	0.013
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00024668	0.0042	0.005	0.00146	0.0012	0.0182	0.00283	0.5232
00067010	<T 0.0044	0.005	UG 0.02681	<T 0.0017	0.0191	0.00510	0.6837
00066010	0.0067	0.004	0.00134	<T 0.0010	0.0134	0.00452	0.7386
00066011	0.0120	0.003	0.00170	<T 0.0016	0.0227	0.00283	0.8399
00066088	<T 0.0058	0.004	0.00350	<T 0.0012	0.0092	0.01224	0.8088
00024696	0.0060	<T 0.001	<T 0.00100	<T 0.0003	0.0088	0.02162	1.0974
00024697	0.0045	<T 0.001	<T 0.00121	<T 0.0003	0.0095	0.01700	1.2141
00106128	****	****	****	****	****	****	****
00094683	0.0058	UG 0.004	<T 0.00152	<T 0.0012	0.0204	0.00699	0.9093

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SE STATION=SMITHS FALLS LOVOL SITE NO.1												
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER	
00067015	AP02566	AS	02	01	JAN 26, 1988	DEC 30, 1987	0945	1545	1	77378	1	
00067016	AP02566	AS	02	01	FEB 23, 1988	JAN 26, 1988	0945	0945	1	81592		
00067017	AP02566	AS	02	01	MAR 22, 1988	FEB 23, 1988	1147	0945	1	80926		
00066007	AP02635	AS	02	01	APR 19, 1988	MAR 22, 1988	1115	1147	1	77596		
00066014	AP02635	AS	02	01	MAY 17, 1988	APR 19, 1988	0948	1115	1	74360		
00024689	AP02783	AS	02	01	JUN 14, 1988	MAY 17, 1988	0958	0948	1	73476		
00024690	AP02783	AS	02	01	JUL 12, 1988	JUN 14, 1988	1134	0958	1	64547		
00024691	AP02915	AS	02	01	AUG 9, 1988	JUL 12, 1988	0922	1134	1	75473		
00024698	AP02915	AS	02	01	SEP 6, 1988	AUG 9, 1988	1057	0922	1	84391		
00024699	AP02915	AS	02	01	OCT 4, 1988	SEP 6, 1988	0956	1057	1	85442		
00024700	AP02915	AS	02	01	NOV 1, 1988	OCT 4, 1988	1100	0956	1	87732		
00024718	AP02919	AS	02	01	NOV 29, 1988	NOV 1, 1988	1023	1100	1	77960		
00094687	AP02994	AS	02	01	DEC 29, 1988	NOV 29, 1988	1245	1023	1	96327		
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE	NITRIC	NITRATE		CALCIUM		
	2				UG/M3	UG/M3	UG/M3	UG/M3		UG/M3		
00067015					6.00	3.15	0.068	0.523	<T	0.097		
00067016					8.36	3.16	0.224	0.545		0.214		
00067017					10.81	3.02	0.111	0.692		1.106		
00066007					4.44	3.43	0.093	0.612		0.361		
00066014		D			2.23	2.73	0.054	0.397		1.224		
00024689					3.75	3.58	0.078	0.272		1.494		
00024690					4.72	6.51	0.124	0.395		1.819		
00024691		Q			3.06	6.03	0.170	0.291		0.808		
00024698		C			1.55	4.50	0.100	0.190		0.533		
00024699		BQ			4.01	3.78	0.112	0.246		0.492		
00024700		Q			3.56	2.02	0.055	0.319		0.502		
00024718					4.01	2.55	0.054	0.423		0.410		
00094687		Q	Z		5.05	2.42	0.094	0.612		0.706		

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SE STATION=SMITHS FALLS LOVOL SITE NO.1									
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD		
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	
00067015	0.549	0.058	0.381	0.073	0.094	D	0.284	<T	0.006
00067016	0.907	0.116	0.576	B 0.388	<T 0.025	<T	0.046		0.009
00067017	UG 1.192	0.093	UG 0.723	B 0.285	UG 0.190		0.371		0.012
00066007	0.419	0.168	0.238	0.142	0.088		0.348	<T	0.006
00066014	0.316	0.114	0.154	0.256	0.215		0.820	<W	0.001
00024689	0.272	0.055	0.101	0.229	0.173	D	0.609		0.010
00024690	0.457	0.101	0.122	0.312	0.241		0.736	<T	0.008
00024691	0.278	0.036	0.497	0.199	0.159		0.252		0.013
00024698	0.190	0.175	0.234	0.130	0.100		0.178		0.012
00024699	0.164	0.018	0.225	0.117	0.095		0.164		0.014
00024700	0.171	0.023	0.094	0.099	0.072		0.171		0.014
00024718	0.192	0.045	0.128	<W 0.006	0.055		0.126		0.014
00094687	0.519	0.070	0.283	0.114	0.071		0.249		0.011
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMUM	SULFATE NYL		
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	
00067015	0.0213	0.003	<T 0.00103	<T 0.0010	0.0258	D	0.00717	0.6048	
00067016	0.0104	0.002	0.00135	<T 0.0018	0.0221		0.00885	0.6104	
00067017	0.0111	0.003	0.00148	<T 0.0023	0.0259		0.00874	0.5313	
00066007	0.0232	0.004	D 0.00322	<T 0.0027	0.0271		0.00515	0.7900	
00066014	0.0161	0.002	<T 0.00094	<T 0.0013	0.0148		0.00767	0.6993	
00024689	0.0150	0.002	0.00191	<T 0.0008	0.0163		0.00825	0.9119	
00024690	0.0201	0.002	0.00294	<T 0.0011	0.0232		0.00703	1.0380	
00024691	0.0129	0.001	<T 0.00106	0.0009	0.0172		0.00874	0.9540	
00024698	0.0073	<T 0.001	<T 0.00107	<T 0.0005	0.0094		0.00984	0.7939	
00024699	0.0071	0.001	<T 0.00152	0.0007	0.0129		0.00878	0.6086	
00024700	0.0074	0.001	<T 0.00148	0.0010	0.0148		0.00467	0.6839	
00024718	0.0059	0.002	<T 0.00141	0.0014	0.0154		0.00872	0.4618	
00094687	0.0087	0.002	<T 0.00166	UG 0.0026	0.0156		0.00353	0.5954	

PART VII

SOUTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

----- REGION=SW STATION=COLCHESTER LOVOL SITE NO.1 -----													
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER		
00074481	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	0725	0740	1	81843	1		
00074486	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	0755	0725	1	51833			
00074509	AP02537	AS	02	01	MAR 22, 1988	FEB 23, 1988	0800	0800	1	81659			
00074514	AP02578	AS	02	01	APR 19, 1988	MAR 22, 1988	1250	1240	1	78945			
00074529	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0747	1250	1	84756			
00074553	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	0618	0747	1	83487			
00074568	AP02672	AS	02	01	JUL 12, 1988	JUN 14, 1988	0725	0618	1	85381			
00074570	AP02724	AS	02	01	AUG 9, 1988	JUL 12, 1988	0700	0741	1	83507			
00074594	AP02798	AS	02	01	SEP 6, 1988	AUG 9, 1988	0720	0700	1	77556			
00074608	AP02896	AS	02	01	OCT 4, 1988	SEP 6, 1988	1120	0725	1	78090			
00074613	AP02896	AS	02	01	NOV 1, 1988	OCT 4, 1988	0740	1120	1	80353			
00074636	AP02952	AS	02	01	NOV 29, 1988	NOV 1, 1988	0750	0750	1	80868			
00074650	AP02980	AS	02	01	DEC 27, 1988	NOV 29, 1988	0810	0750	1	34680			
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE		NITRIC		NITRATE	CALCIUM		
	2				UG/M3	UG/M3		UG/M3		UG/M3	UG/M3		
00074481					11.93	LG	0.34	0.189	LG	0.232	LG	0.076	
00074486		C			15.07	LG	0.69	UG	0.421	LG	0.367	LG	0.063
00074509					9.99		3.45	0.236		1.053		0.359	
00074514					12.42		4.90	0.127		1.153		0.614	
00074529					7.92		3.99	0.151		0.967		0.258	
00074553					14.14		8.20	0.210		1.413		2.875	
00074568		Q		U	13.81	U	9.72	U	0.193	U	0.615	U	4.802
00074570					8.69		11.71	D	0.090	D	1.473	B	2.799
00074594					10.16		9.09	0.219		1.135		2.508	
00074608		Q			8.48		7.22	0.182		1.024		3.458	
00074613					9.60		3.98	0.060		0.815		5.849	
00074636					16.38		4.91	LG	0.030		1.125		1.855
00074650		A	F		15.43		3.37		0.133		1.211		4.614

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SW STATION=COLCHESTER LOVOL SITE NO.1								
SAMPLE NUMBER	CHLORIDE	POTASSIUM		SODIUM	IRON	ALUMINIUM		LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074481	0.440	<T	0.005	0.087	0.029	LG	0.012	0.001
00074486	0.617	<T	0.010	0.188	LG	0.027	0.031	0.010
00074509	0.888		0.048	0.310	0.132		0.107	0.085
00074514	0.633		0.079	0.176	0.191		0.214	0.177
00074529	0.614		0.073	0.116	0.178		0.238	<W 0.024 <T 0.006
00074553	0.749		0.096	0.129	B 1.318	D 1.030	D 1.138	D 0.020
00074568	U 0.562	U 0.126	U 0.167	U 1.288	U 0.611	D 0.479	U 1.874	U 0.026
00074570	0.665		0.113	0.136			D 0.778	0.028
00074594	0.554		0.119	0.184		0.309	0.258	0.686 BL ****
00074608	0.563	<T 0.013		0.096		0.512	0.320	0.730 0.028
00074613	0.560	<T 0.006		0.137		0.398	0.212	0.311 0.022
00074636	0.791		0.080	0.210		0.198	0.113	0.148 0.028
00074650	1.038		0.072	0.252		0.288	0.130	0.288 0.023
SAMPLE NUMBER	MANGANESE	COPPER		NICKEL	VANADIUM	ZINC	CADMİUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074481	LG 0.0006		0.001	LG 0.00012	LG 0.0002	LG 0.0071	0.00215	0.8125
00074486	LG 0.0019		0.003	UG 0.00887	B 0.0069	0.0405	D 0.02045	1.5917
00074509	0.0073		0.006	0.00233	0.0013	0.0508	0.01748	1.4695
00074514	0.0120		0.005	0.00367	B 0.0075	0.0412	0.00657	0.7385
00074529	0.0177		0.002	0.00425	<T 0.0021	0.0389	0.00993	1.1032
00074553	UG 0.0311	B 0.007	D 0.00707	UG 0.0072	UG 0.0551		0.00204	1.1080
00074568	U 0.0398	U 0.009	U 0.00621	U 0.0048	U 0.0258	U 0.00141	U 1.3703	
00074570	0.0216		0.003	0.00407	0.0044	B 0.0778	0.00263	B 0.1233
00074594	0.0181		0.005	<T 0.00090	0.0018	0.0877	0.00077	1.0831
00074608	0.0205		0.004	<T 0.00205	0.0018	0.0653	UG 0.00909	0.6147
00074613	0.0162		0.003	<T 0.00174	0.0011	0.0672	0.00124	0.6223
00074636	0.0136		0.004	<T 0.00173	0.0014	0.0544	0.00087	0.5565
00074650	0.0147		0.003	<T 0.00202	<T 0.0014	0.0577	<T 0.00087	1.4706

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION-SW STATION=PALMERSTON LOVOL SITE NO.1												
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME(L)	PASSIVE NUMBER	
00074485	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	0915	1300	1	82256	1	
00074490	AP02484	AS	02	01	FEB 24, 1988	JAN 26, 1988	1215	0915	1	87842		
00074513	AP02537	AS	02	01	MAR 22, 1988	FEB 24, 1988	1300	1215	1	63409		
00074518	AP02578	AS	02	01	APR 19, 1988	MAR 22, 1988	1300	1300	1	50327		
00074530	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1230	1300	1	74416		
00074555	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1300	1230	1	57694		
00074566	AP02672	AS	02	01	JUL 12, 1988	JUN 14, 1988	1300	1300	1	-		
00074573	AP02724	AS	02	01	AUG 9, 1988	JUL 12, 1988	1300	1300	1	93622		
00074598	AP02798	AS	02	01	SEP 6, 1988	AUG 9, 1988	1300	1300	1	85563		
00074612	AP02896	AS	02	01	OCT 4, 1988	SEP 6, 1988	1130	1300	1	77216		
00074617	AP02896	AS	02	01	NOV 1, 1988	OCT 4, 1988	1300	1300	1	80878		
00074640	AP02952	AS	02	01	NOV 29, 1988	NOV 1, 1988	1330	1300	1	77645		
00074654	AP02980	AS	02	01	DEC 29, 1988	NOV 29, 1988	0945	1330	1	76048		
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE	NITRIC	NITRATE		CALCIUM		
2					UG/M3	UG/M3	UG/M3	UG/M3		UG/M3		
00074485					9.22	3.45	0.182	0.796		0.674		
00074490					12.32	3.36	0.140	0.928		0.233		
00074513					8.02	3.01	0.244	0.607		0.237		
00074518	AB				4.13	3.74	0.254	0.904		0.278		
00074530					2.78	3.59	0.077	0.739		0.400		
00074555	B		LG	0.36	<T	0.11	<W	0.003	0.156	0.364		
00074566	AQF			*****	*****	*****	*****	*****	*****	*****		
00074573					4.34	8.06	0.166	0.662		0.299		
00074598					3.27	4.93	0.108	0.678		0.815		
00074612	A				3.33	4.61	0.114	0.719		0.622		
00074617					4.44	2.47	0.074	0.606		0.334		
00074640					18.52	3.35	0.103	0.889		0.258		
00074654	Q	Z			8.09	2.67	0.089	0.809		0.421		

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SW STATION=PALMERSTON LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074485	0.650	0.053	0.275	UG 0.236	UG 0.224	0.182	0.007
00074490	0.524	0.047	0.233	0.112	0.109	0.068	0.004
00074513	0.481	0.029	0.188	0.065	0.053	0.076	0.004
00074518	0.467	0.045	0.147	<T 0.044	0.083	<T 0.045	<W 0.002
00074530	0.323	0.041	0.097	<T 0.067	0.212	<T 0.055	<T 0.006
00074555	0.199	<W 0.003	0.071	<T 0.075	<W 0.009	0.208	<W 0.002
00074566	****	****	****	****	****	****	****
00074573	0.369	0.089	0.092	0.171	0.094	0.128	D 0.022
00074598	0.292	0.064	0.131	0.129	0.140	0.223	IBL ****
00074612	0.324	<T 0.013	0.155	0.168	0.118	0.194	0.017
00074617	0.272	<T 0.006	0.087	0.136	0.073	0.073	0.011
00074640	0.489	0.052	0.142	0.102	0.049	0.061	0.015
00074654	0.434	0.046	0.155	0.105	0.075	0.114	0.010
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074485	0.0085	0.002	0.00073	0.0013	0.0164	0.00213	D 0.9519
00074490	0.0057	0.003	0.00524	0.0013	0.0353	0.01116	0.8766
00074513	0.0039	B 0.013	0.00268	0.0006	0.0197	0.00725	1.8609
00074518	<T 0.0070	0.003	<T 0.00199	<T 0.0014	0.0328	0.00942	1.7784
00074530	0.0134	0.003	0.00376	<T 0.0012	0.0249	0.01094	0.9810
00074555	<T 0.0023	<T 0.001	0.00243	<T 0.0010	<T 0.0031	0.00728	0.4073
00074566	****	****	****	****	****	****	****
00074573	0.0101	0.004	0.00320	<T 0.0014	0.0192	0.02136	1.0681
00074598	0.0072	0.002	<T 0.00035	0.0007	0.0152	<T 0.00023	0.7012
00074612	0.0076	0.002	<T 0.00130	0.0008	0.0181	<T 0.00065	0.6993
00074617	0.0053	<T 0.001	<T 0.00124	0.0007	0.0148	<T 0.00049	0.5564
00074640	0.0062	0.002	<T 0.00077	0.0009	0.0193	<T 0.00039	0.8887
00074654	0.0055	0.002	<T 0.00145	0.0013	0.0197	<T 0.00066	0.7101

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

----- REGION=SW STATION=PORT STANLEY LOVOL SITE NO.1 -----

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX		SULFATE	NITRIC		NITRATE		CALCIUM
	2			UG/M3		UG/M3	UG/M3		UG/M3		UG/M3
00074482	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1100	0930	1	63147	
00074487	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	0940	1100	1	79107	
00074510	AP02537	AS	02	01	MAR 22, 1988	FEB 23, 1988	0900	0940	1	80171	
00074515	AP02578	AS	02	01	APR 19, 1988	MAR 22, 1988	1530	0900	1	80380	
00074528	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0900	1530	1	78953	
00074546	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1030	0900	1	77212	
00074563	AP02672	AS	02	01	JUL 12, 1988	JUN 14, 1988	0930	1030	1	64330	
00074571	AP02724	AS	02	01	AUG 9, 1988	JUL 12, 1988	0900	0930	1	66460	
00074595	AP02798	AS	02	01	SEP 6, 1988	AUG 9, 1988	1330	0900	1	75020	
00074609	AP02896	AS	02	01	OCT 4, 1988	SEP 6, 1988	1000	1330	1	40680	
00074614	AP02896	AS	02	01	NOV 1, 1988	OCT 4, 1988	0945	1000	1	59670	
00074639	AP02952	AS	02	01	NOV 29, 1988	NOV 1, 1988	0930	0945	1	52810	
00074651	AP02980	AS	02	01	DEC 28, 1988	NOV 29, 1988	0930	0930	1	74910	
00074482	C			9.82	2.79	0.103	0.768	0.772			
00074487		LG	0.56	LG	0.20	D	0.073	D	0.139	LG	0.025
00074510			9.75		3.64		0.187		0.967		0.407
00074515			9.82		3.73		0.228		0.946		0.280
00074528			4.62		4.42		0.117		0.925	LG	0.259
00074546			5.82		6.99		0.220		1.217		0.648
00074563			7.05		5.15		0.249		0.995		0.777
00074571	A		5.65		8.92		0.230		0.602	<W	0.030
00074595	A		6.66		7.33		0.227		0.693		0.853
00074609	Q		7.29		5.26		0.256		0.811		0.615
00074614	AB		6.06		2.15		0.097		0.503		0.335
00074639	B		12.94		1.44		0.155		0.492		0.148
00074651	B		13.74		2.60		0.144		0.834		0.561

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SW STATION=PORT STANLEY LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074482	0.847	0.056	0.328	0.121	0.122	0.108	0.006
00074487	B 0.107	<T 0.004	0.067	LG 0.009	LG 0.003	LG 0.006	0.001
00074510	0.699	0.046	0.287	0.123	0.104	0.070	0.005
00074515	0.485	0.050	0.121	0.121	0.107	<T 0.028	<T 0.004
00074528	0.443	0.143	0.121	0.148	0.244	<W 0.025	<W 0.001
00074546	0.453	0.093	0.102	0.337	0.324	0.389	<T 0.004
00074563	0.451	0.093	0.152	0.466	0.466	0.591	0.016
00074571	0.406	0.105	0.129	0.196	<T 0.015	<W 0.030	0.030
00074595	0.320	0.097	0.150	0.227	0.253	0.150	BL ****
00074609	0.418	<T 0.012	0.111	UG 2.360	0.189	0.125	0.020
00074614	0.302	<T 0.025	0.176	0.137	0.079	0.060	0.010
00074639	0.322	0.028	0.104	<T 0.055	0.032	<T 0.027	0.006
00074651	0.534	0.053	0.207	0.174	0.095	0.117	0.013
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074482	0.0055	0.003	0.00143	0.0019	0.0285	0.00228	0.8124
00074487	LG 0.0010	0.001	UG 0.00645	0.0009	LG 0.0006	0.00814	0.5790
00074510	0.0081	0.005	0.00374	0.0017	0.0337	0.00795	0.9081
00074515	0.0106	0.002	0.00137	<T 0.0016	0.0280	0.00867	1.6049
00074528	0.0171	0.004	0.00545	<T 0.0018	0.0342	0.01251	0.9411
00074546	0.0194	0.003	0.00168	<T 0.0019	0.0350	0.00596	1.3469
00074563	0.0233	0.005	0.00202	<T 0.0017	0.0342	0.00061	1.8809
00074571	0.0135	0.003	0.00481	<T 0.0017	0.0346	0.00146	1.6551
00074595	0.0200	0.002	<T 0.00080	0.0012	0.0320	<T 0.00040	1.0531
00074609	0.0369	0.005	<T 0.00320	<T 0.0010	0.0295	<T 0.00074	1.1308
00074614	0.0057	<T 0.001	<T 0.00168	<T 0.0007	0.0136	<T 0.00017	0.8212
00074639	0.0034	0.003	<T 0.00114	<T 0.0004	0.0121	<T 0.00019	0.7764
00074651	0.0083	0.002	<T 0.00147	0.0024	0.0307	<T 0.00053	0.6675

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SW STATION=SHALLOW LAKE LOVOL SITE NO.1											
SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
00084181	AP02443	AS	02	01	JAN 26, 1988	DEC 29, 1987	0905	1100	1	81040	1
00084078	AP02482	AS	02	01	FEB 23, 1988	JAN 26, 1988	0950	0950	1	80130	
00084242	AP02508	AS	02	01	MAR 22, 1988	FEB 23, 1988	1100	0950	1	78500	
00084305	AP02550	AS	02	01	APR 19, 1988	MAR 22, 1988	1130	1100	1	77030	
00084410	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	0950	1130	1	80010	
00084473	AP02628	AS	02	01	JUN 14, 1988	MAY 17, 1988	1200	0950	1	78710	
00084504	AP02696	AS	02	01	JUL 12, 1988	JUN 14, 1988	1335	1200	1	78950	
00084553	AP02705	AS	02	01	AUG 9, 1988	JUL 12, 1988	1220	1335	1	75310	
00084648	AP02760	AS	02	01	SEP 6, 1988	AUG 9, 1988	1210	1220	1	89230	
00084822	AP02818	AS	02	01	OCT 4, 1988	SEP 6, 1988	1250	1215	1	79760	
00084901	AP02870	AS	02	01	NOV 1, 1988	OCT 4, 1988	1400	1255	1	52620	
00042007	AP02915	AS	02	01	NOV 29, 1988	NOV 1, 1988	1630	1400	1	84617	
00042506	AP02950	AS	02	01	DEC 27, 1988	NOV 29, 1988	1405	1635	1	76529	
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS	SULFUR.DIOX	SULFATE	NITRIC	NITRATE		CALCIUM		
	2			UG/M3	UG/M3	UG/M3	UG/M3		UG/M3		
00084181				10.77	2.80	0.111	0.784		0.531		
00084078				7.70	B 1.52	0.125	0.443		0.167		
00084242		<T	0.07	<W 0.03	D 0.003	D 0.013	LG 0.025				
00084305		D	15.33	3.95	0.143	0.759	0.312				
00084410		LG	1.25	LG 0.84	0.050	0.169	<W 0.025				
00084473			2.02	2.21	0.054	0.248	<T 0.065				
00084504			4.36	5.26	LG 0.028	0.437	0.431				
00084553			3.24	4.78	0.163	0.239	<W 0.027				
00084648			3.25	3.16	0.092	0.241	0.361				
00084822			3.73	3.90	0.118	0.483	0.383				
00084901			4.35	1.96	0.103	0.447	0.364				
00042007			3.80	1.70	0.064	0.473	0.118				
00042506			5.15	1.50	0.089	0.523	0.235				

ONTARIO MINISTRY OF THE ENVIRONMENT
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
DATA LISTING
CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SW STATION=SHALLOW LAKE LOVOL SITE NO.1

SAMPLE NUMBER	CHLORIDE		POTASSIUM		SODIUM		IRON		ALUMINIUM		MAGNESIUM		LEAD	
	UG/M3		UG/M3		UG/M3		UG/M3		UG/M3		UG/M3		UG/M3	
00084181	D	0.395		0.064		0.189		0.069		0.053		0.148		0.004
00084078	B	0.225		LG	0.014		0.129		0.037		0.026		LG	0.006
00084242	B	0.070			0.052		LG	0.056	B	0.008	B	0.003	LG	0.006
00084305		0.389			0.052		0.227		0.079		0.066	<T	0.075	0.009
00084410		0.162		LG	0.014		0.044	<W	0.012	<T	0.030	<W	0.025	<T
00084473	ICR	****		LG	0.032		0.077	<T	0.013		0.069	<W	0.025	<W
00084504		0.291			0.072		0.293		0.342	D	0.367	<T	0.066	0.007
00084553		0.246			0.127		D	0.216		0.112		0.062	<W	0.027
00084648		0.179			0.045		0.106		0.109		0.045		0.167	0.008
00084822		0.207			0.050		0.165		0.107		0.247	<T	0.062	<T
00084901		0.285			0.038		0.138	<T	0.061		0.061		0.070	IBL
00042007		0.189		<T	0.012		0.089	<T	0.033		0.028	<T	0.032	0.008
00042506		0.314			0.033		0.147		0.086		0.054		0.056	0.008
SAMPLE NUMBER	MANGANESE		COPPER		NICKEL		VANADIUM		ZINC		CADMIUM		SULFATE NYL	
	UG/M3		UG/M3		UG/M3		UG/M3		UG/M3		UG/M3		UG/M3	
00084181		0.0049			0.003		0.00074		0.0011		0.0228		0.00012	0.6824
00084078	B	0.0012			0.002		0.00037		0.0009	LG	0.0087		0.00210	0.8960
00084242	LG	0.0006			0.002		0.00178		0.0004	LG	0.0006		0.00208	<W 0.0127
00084305	<T	0.0058			0.004		0.00182	<T	0.0013		0.0175		0.00770	1.3371
00084410	<T	0.0025		<T	0.001		0.00250	<W	0.0006	<T	0.0029		0.00507	0.6437
00084473		0.0076			0.002		0.00470	<W	0.0006		0.0089		0.00266	0.6645
00084504		0.0190			0.004		0.00950	<T	0.0016		0.0139		0.00925	0.7093
00084553		0.0093			0.003		0.00558	<T	0.0016		0.0146		0.00983	1.1088
00084648	<T	0.0050			0.002		0.00303	<T	0.0010		0.0146		0.00148	0.6220
00084822	<T	0.0063			0.003		0.00339	<W	0.0006		0.0182		0.00079	0.7372
00084901		0.0042		<T	0.001	<W	0.00038	<T	0.0006		0.0093	<T	0.00019	0.8552
00042007		0.0030			0.002	<T	0.00047	<T	0.0006		0.0095	<T	0.00035	0.5554
00042506		0.0041			0.002	<T	0.00248	<T	0.0005		0.0115	<T	0.00026	0.7056

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SW STATION=WILKESPORT LOVOL SITE NO.1

SAMPLE NUMBER	SUBMISSION NUMBER	LIS SAMPLE TYPE	PROJECT CODE	SUB PROJECT CODE	SAMPLE REMOVAL DATE	EXPOSURE DATE	SAMPLE END HR	SAMPLE START HR	FILT. TYPE	FLOW VOLUME (L)	PASSIVE NUMBER
SAMPLE NUMBER	PASSIVE NUMBER	FIELD COMMENTS	OFFICE COMMENTS		SULFUR.DIOX	SULFATE	NITRIC	NITRATE		CALCIUM	
00074483	AP02482	AS	02	01	JAN 26, 1988	DEC 29, 1987	1600	1400	1	88180	
00074488	AP02484	AS	02	01	FEB 23, 1988	JAN 26, 1988	1730	1600	1	93030	
00074511	AP02537	AS	02	01	MAR 22, 1988	FEB 23, 1988	1530	1730	1	77520	
00074516	AP02578	AS	02	01	APR 19, 1988	MAR 22, 1988	1545	1600	1	65810	1
00074531	AP02612	AS	02	01	MAY 17, 1988	APR 19, 1988	1530	1545	1	67190	
00074550	AP02635	AS	02	01	JUN 14, 1988	MAY 17, 1988	1500	1530	1	62100	
00074564	AP02672	AS	02	01	JUL 12, 1988	JUN 14, 1988	1400	1500	1	45840	
00074572	AP02724	AS	02	01	AUG 9, 1988	JUL 12, 1988	1600	1400	1	61100	
00074596	AP02798	AS	02	01	SEP 6, 1988	AUG 9, 1988	1500	1600	1	43900	
00074610	AP02896	AS	02	01	OCT 4, 1988	SEP 6, 1988	1400	1500	1	67460	
00074615	AP02896	AS	02	01	NOV 1, 1988	OCT 4, 1988	1500	1400	1	86500	
00074637	AP02952	AS	02	01	NOV 29, 1988	NOV 1, 1988	1400	1500	1	81380	
00074652	AP02980	AS	02	01	DEC 28, 1988	NOV 29, 1988	1100	1400	1	85090	
					UG/M3	UG/M3	UG/M3	UG/M3		UG/M3	
00074483					11.06	2.02	0.225		0.544	0.508	
00074488					20.94	1.73	0.183		0.661	0.134	
00074511					8.91	LG	0.126	LG	0.252	LG	0.026
00074516					12.24	4.63	0.122		1.086		0.608
00074531					7.72	4.57	0.089		0.886	D	1.048
00074550					10.27	5.73	0.153		1.151		1.433
00074564	CA				8.96	LG	0.087		0.524	<W	0.044
00074572					10.76	9.00	0.172		0.606	<W	0.033
00074596	C				7.81	LG	0.059	0.353			0.502
00074610	Q				6.72	LG	0.042	LG	0.222	<T	0.068
00074615			UG		13.76	3.34	0.067		0.630		0.543
00074637					15.27	4.14	0.108		0.934		0.319
00074652					13.35	3.02	0.078		0.799		0.717

ONTARIO MINISTRY OF THE ENVIRONMENT
 APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY
 DATA LISTING
 CUMULATIVE SAMPLING ANALYSIS RESULTS

REGION=SW STATION=WILKESPORT LOVOL SITE NO.1							
SAMPLE NUMBER	CHLORIDE	POTASSIUM	SODIUM	IRON	ALUMINIUM	MAGNESIUM	LEAD
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074483	0.612	0.042	0.220	0.153	0.144	0.070	0.003
00074488	0.666	0.029	0.209	0.067	0.069	0.031	0.002
00074511	0.355	0.023	0.070	LG 0.022	LG 0.006	LG 0.006	0.001
00074516	0.585	0.063	0.169	0.164	0.186	<T 0.065	<T 0.006
00074531	0.610	0.053	0.150	0.149	0.320	<T 0.048	<T 0.003
00074550	0.741	0.082	0.175	0.354	0.322	0.531	<T 0.006
00074564	0.436	<W 0.005	0.136	<T 0.035	<W 0.011	0.458	<W 0.002
00074572	0.646	0.105	0.155	0.213	<T 0.031	<W 0.033	0.046
00074596	0.433	0.023	0.165	<T 0.013	LG 0.022	0.025	IBL ****
00074610	0.282	<W 0.007	0.163	<T 0.042	LG 0.013	<T 0.012	LG 0.001
00074615	0.532	0.052	0.185	0.197	0.116	0.099	0.014
00074637	0.455	0.061	0.114	0.120	0.076	0.058	0.018
00074652	0.646	0.065	0.194	0.153	0.090	0.114	0.014
SAMPLE NUMBER	MANGANESE	COPPER	NICKEL	VANADIUM	ZINC	CADMIUM	SULFATE NYL
	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3	UG/M3
00074483	0.0074	0.002	B 0.09583	LG 0.0001	0.0153	0.00192	0.6158
00074488	0.0038	0.002	0.00548	0.0012	0.0215	0.00986	1.3329
00074511	LG 0.0013	0.004	0.00439	LG 0.0005	LG 0.0006	0.00375	1.3029
00074516	0.0099	0.004	0.00198	<T 0.0020	0.0319	0.01269	1.0074
00074531	0.0156	0.003	0.00506	D 0.0048	0.0335	0.01150	1.1088
00074550	0.0137	0.004	0.00258	<T 0.0040	0.0354	0.00644	1.1723
00074564	<W 0.0022	<T 0.001	0.00262	<W 0.0011	<T 0.0083	0.00028	1.0100
00074572	0.0115	0.003	0.00524	0.0057	0.0393	0.00123	1.9313
00074596	<T 0.0011	0.003	<T 0.00068	<W 0.0002	0.0077	<W 0.00011	0.8428
00074610	LG 0.0010	<W 0.000	<W 0.00030	<W 0.0001	0.0044	<T 0.00015	0.5781
00074615	0.0072	0.002	<T 0.00139	0.0018	0.0254	<T 0.00058	0.7514
00074637	0.0079	0.003	<T 0.00098	0.0010	0.0319	<T 0.00049	0.7496
00074652	0.0086	0.003	<T 0.00129	0.0018	0.0447	0.00082	0.6581

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